

PLAN: Charlestown



The Boston Planning & Development Agency (BPDA)

The Boston Planning & Development Agency (BPDA) is the planning and economic development agency for the City of Boston. The BPDA plans and guides inclusive growth in our city, creating opportunities for everyone to live, work, and connect. Through our future-focused, city-wide lens, we engage communities, implement new solutions, partner for greater impact, and track progress.

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Information

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Letter from the Chief of Planning



Dear Neighbor:

The Boston Planning & Development Agency (BPDA) is pleased to share PLAN: Charlestown, which sets a clear vision and set of expectations for future development. Over the past four years, the Charlestown community has worked with the BPDA to shape this document into what we believe will allow the neighborhood to grow responsibly, while also retaining its unique history and character. Staff has been working diligently with the community to ensure new investments in Charlestown serve current and future residents and will create a resilient, affordable, and equitable neighborhood.

From its role in the revolutionary war, to its longstanding commitment to being home to people of a wide range of incomes, Charlestown has a rich history. Any visitor would be struck by the lasting character of the Original Peninsula -- its brick townhomes, colorful houses, narrow streets, busy family-filled parks, flourishing small businesses, and charm. Its parks and open spaces, and its proximity to Downtown and the waterfront make Charlestown an attractive place to live for longtime and new Boston residents. This square mile of the City is an amazing neighborhood with a bright future.

In this document, you can expect to see distinct improvements or recommendations specific to the needs of Charlestown, like creating dozens of new acres of publicly accessible open space, including two full-size soccer fields available for multi-use purposes; up to three new free neighborhood transit shuttle bus routes; commitments towards arts & culture improvements; and much more. In addition, several recommendations are tactfully targeted to the Original Peninsula and are aimed at improving the quality of life for residents, such as: enhancing historic preservation tools, promoting affordable neighborhood retail along Charlestown's main corridors, public school improvements, enhancing public and social services, and more. These are all ideas that came directly from Charlestown community members.

Through this plan, community members, private and public developers, institutions, professional staff, and other stakeholders will have a common vision and framework to work toward. We invite you to partner with us to realize the vision provided in this document, and we look forward to pursuing and implementing this plan together.

Thank you to everyone who participated in this process,

Best,

A stylized, handwritten signature in black ink, consisting of a large 'A' followed by a series of loops and a final horizontal stroke.

Arthur Jemison, Chief of Planning



Executive Summary

INTRODUCTION

Charlestown is Boston's oldest neighborhood. Its brick townhouses, traditional pubs, and historic monuments have drawn many people to its unique and vibrant residence. As Boston's population continues to grow and the region grapples with a housing shortage, PLAN: Charlestown seeks to ensure that existing and future generations of residents appreciate access to all that is loved about this neighborhood.

Recent population trends tell us that Charlestown is attractive to older, more affluent adult populations and families with children. Only 28% of the neighborhood identifies as Hispanic or non-White compared to 55% citywide. This, coupled with data on average housing costs, shows us that Charlestown is less accessible to Black and Brown populations than other neighborhoods such as East Boston and Dorchester.

Beginning in 2019, public and City agencies have used the PLAN: Charlestown process to explore with residents how to maintain the neighborhood's historic character while opening it up to more people by planning for growth. In particular, the PLAN harnesses the mostly industrial areas around Sullivan Square and west of Rutherford Avenue to promote much-needed housing that is close to major regional transportation assets. By 2050, the PLAN anticipates that the neighborhood population could return to levels seen in the 1950s, or roughly 80% more than the current population.

PLAN Charlestown is a community guided plan. Engagements varied in size and style throughout various phases of the planning process, and included an advisory group of neighborhood residents, public meetings and workshops, and informal engagements like walking tours and office hours. With additional recommendations across housing, transportation, preservation, neighborhood services, and more, PLAN: Charlestown outlines recommendations for quality of life improvements for both existing and future residents. As much as residents shape the character of the neighborhood, the housing, amenities, and services offered in Charlestown will also affect who wants to or who is able to live there- PLAN: Charlestown outlines a path forward to advance this vision.

HOUSING + MOBILITY

Alongside other neighborhoods, PLAN: Charlestown will do its part to address the City of Boston's housing shortage by allowing more housing in certain parts of the neighborhood, while also prioritizing the types of housing that residents want and need. The main transportation assets in Charlestown – the Orange Line stations – are not sufficiently surrounded by homes or jobs that can benefit from that transit access. Instead, these areas are largely surrounded by industrial uses, which have waned over recent years leaving these properties underutilized. Allowing housing and mixed uses into these areas that have historically been zoned for industry will accommodate more jobs and residents in the neighborhood.

Furthermore, upwards of 50% of Charlestown residents are cost burdened by rent. Alongside targeted increases in housing production near transit stations, the plan includes recommendations for updated zoning to incentivize the creation of income-restricted and affordable housing. Together, these policy changes are critical to opening up the neighborhood to a broader range of socio-economic and ethnic communities as Charlestown's population continues to expand.

PLAN: Charlestown is happening at a moment when significant transportation investments are already underway. These investments will dramatically expand transportation options in Charlestown. From the doubling of bus service, to the redesign of Sullivan Square and

Rutherford Avenue, to the completion of the North Washington Street Bridge, PLAN: Charlestown's land use recommendations are crafted around these new transportation options. In addition, the plan identifies additional recommendations to promote safe, accessible, and reliable transportation across all types of travel in the neighborhood.

Some key transportation recommendations from PLAN: Charlestown include: the launching of a new public shuttle system to connect residents throughout the neighborhood to transit nodes such as Sullivan Square, conducting deeper studies into key corridors in Charlestown such as Main Street, Medford Street, Bunker Hill Street, and Chelsea Street, and emphasizing walking, biking, and transit use as a standard through policy implementation and design guidance. While significant efforts have been in put into the planning process, equal amounts of energy have been placed in ensuring that these plans are able to be realized. As of the release of this plan, among transportation and bridge infrastructure projects alone, various government agencies including the Massachusetts Department of Transportation (MassDOT) and the City of Boston have already been successful in securing nearly half a billion dollars in implementation funding to replace or improve existing infrastructure in Charlestown that will improve pedestrian connections, decrease congestion, provide bicycle connection, and much more.

OPEN SPACE + CLIMATE RESILIENCE

As Charlestown's population grows, a coordinated approach to the production of new green space is needed. A major priority of PLAN: Charlestown is to maintain or increase the ratio of open space to residents that it already has. In total, the plan calls for the creation of 20 acres of new public open space on a combination of public and private parcels.

The type and scale of parks included in the plan reflect key uses identified by residents, such as more dedicated sports fields. Trees and outdoor green spaces are among the most effective nature-based heat mitigation strategies as they reduce temperatures by providing shade through ambient cooling radiated from their leaves.

From rising seas to higher daytime temperatures, Charlestown is exposed to climate change impacts. Given the importance of climate adaptation, the City previously completed multiple climate resilience plans which cover the neighborhood. These plans - including Climate Ready Boston - identify a wide range of strategies to protect the neighborhood, some of which are already underway.

Beyond major infrastructure recommendations to help Charlestown adapt to its climate future, PLAN: Charlestown includes key open space and urban design recommendations for resilience such as increasing tree canopy and green infrastructure while using more sustainable materials with less heat impact.

PRESERVATION + ARTS AND CULTURE

Be it that Charlestown is the oldest neighborhood in Boston, preservation of its historic fabric and charm is a major concern for today's residents. The PLAN builds off the research of dedicated historians and preservation advocates to present proactive approaches to this effort.

The Office of Historic Preservation (OHP) is responsible for recording information about the historic, architectural, and archeological significance of both properties and districts within Boston's neighborhoods. Among the PLAN's recommendations for preservation a complete and updated inventory should be conducted for the entire Charlestown neighborhood as well as to reform the Boston Zoning Code's Article 85, Demolition Delay, citywide.

Maintaining Charlestown's growing arts and culture uses is critical to the neighborhood's vitality as they contribute to its unique sense of place. Charlestown has one dedicated performing arts venue, and just a few active art studios. One of the key recommendations outlined in the PLAN is to reduce restrictions on arts and culture uses in subdistrict areas across the neighborhood.

RETAIL, FOOD SECURITY + NEIGHBORHOOD SERVICES

Local retail not only serves daily needs, but also facilitates community building and active streets. Residents' feedback about retail has centered on four concerns: 1) the loss of small businesses; 2) vacant storefronts; 3) missing essential retail like laundromats and 4) a lack of food options.

There is only one full-service grocery store in Charlestown located at the Bunker Hill Mall. While the grocery store does accept SNAP and WIC benefits, it is generally a more expensive grocery chain, and may not be affordable to many households. Therefore one of the key recommendations in the PLAN is to encourage developers to include retail facilities in their proposals, especially as the areas West of Rutherford Avenue change. PLAN: Charlestown also prioritizes grocery stores, pharmacies, clinics, and food and beverage establishments.

Charlestown has a robust collection of neighborhood services which aid and support its residents' day to day life, including Emergency Medical Services (EMS), Fire Operation Services, Police Services, and more. A few of the key recommendations outlined in the PLAN around the strengthening of these services include: adding a second ambulance bay to Charlestown's EMS station, training Charlestown's fire companies in Tech Rescue, and conducting a facilities staffing study of the Charlestown A-15 police station.

CONCLUSION

The City has three major tools to realize any planning initiative: zoning & regulatory powers, private development review, and direct investment of public funds. Historically, major planning initiatives led by the BPDA have primarily yielded zoning reforms and informed private investment in the private and public realm. Recent planning efforts, including PLAN: Charlestown, mark a turning point. In 2023, Mayor Wu created the Planning Advisory Council (PAC) to help city departments better coordinate all the tools in the toolbox, as part of a larger transformation agenda and urgent need to turn plans into reality.

PLAN: Charlestown offers a vision for the future of the neighborhood based on significant input from community members, City and state agencies, and expert consultants. The plan culminates in a framework for zoning with over 90 recommendations across a range of topics. Implementation of some of these recommendations will occur in the short-term, while others will be implemented over the course of the next 30 years.

To conclude, PLAN: Charlestown offers a vision for the future of Charlestown based on significant input from community members, city and state agencies, and expert consultants. Chapter 7: Implementation provides more detail with regard to how the plan's vision will be realized.



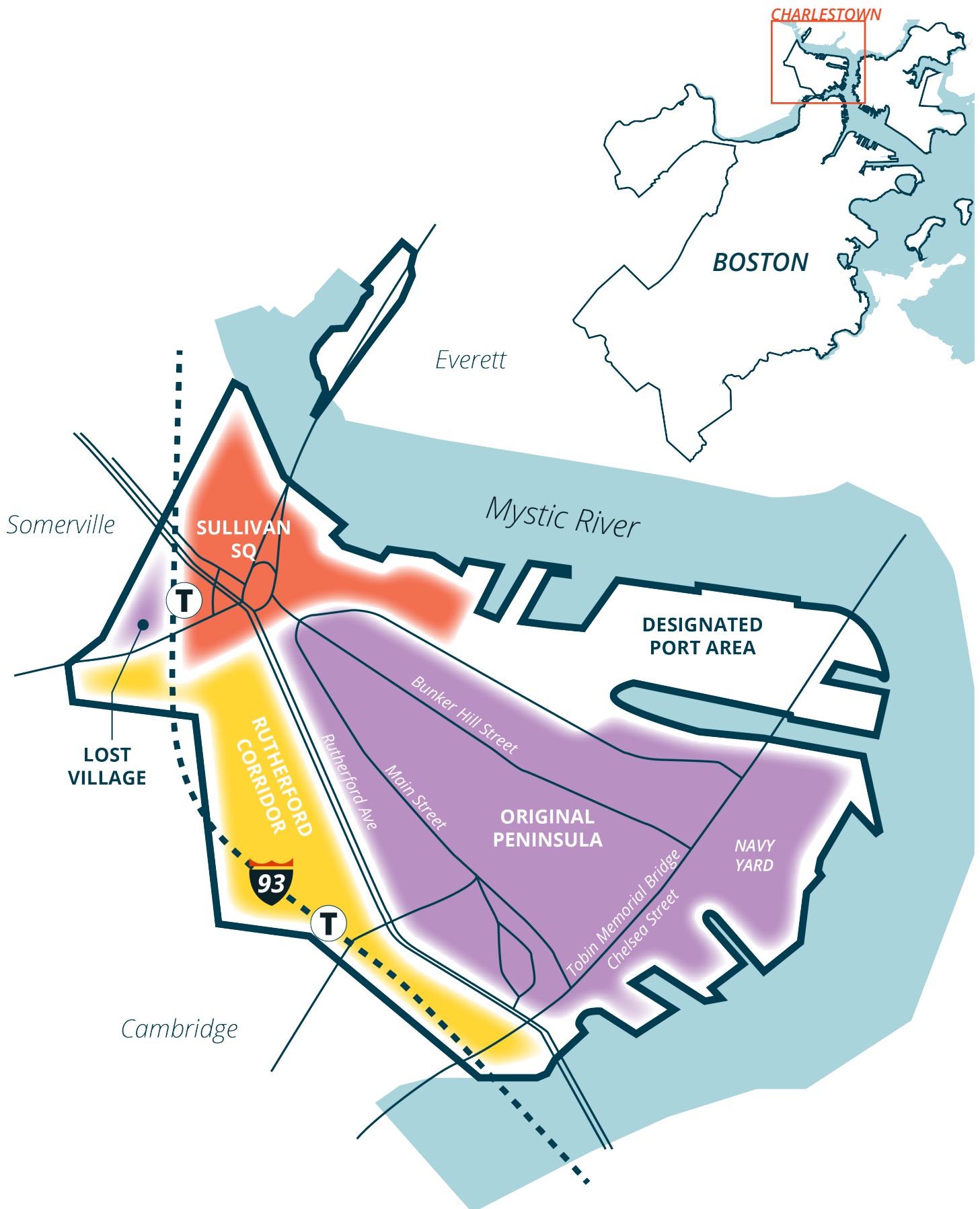


Figure 1

Using this PLAN

CHARLESTOWN GEOGRAPHIES

This PLAN consistently refers to four main Charlestown geographies, which were identified with neighborhood residents at the start of the planning process: the Original Peninsula, the Lost Village, Rutherford Avenue, and Sullivan Square (figure 1). The Original Peninsula and the Lost Village are lower scale, more residential parts of Charlestown. The Original Peninsula is the area most associated with the neighborhood, as it includes the Bunker Hill Monument, the Charlestown Navy Yard, and Main Street. The Lost Village is west of the elevated I-93 interstate, and even many Charlestown residents do not realize it is a part of their neighborhood. This area did not receive the same urban renewal investments or protections as the Original Peninsula. Chapters 2, 5, and 6 focus on these areas.

Figure 1 (p.12). Charlestown areas and location map

The Rutherford Avenue and Sullivan Square areas, originally tidal lands, were filled in the late 1800's and have been home to industrial uses for the past hundred years. These areas are the closest to Charlestown's MBTA stations and are where most of the development pressure in the neighborhood is concentrated. Chapters 2, 3, and 4 focus on these areas. The Designated Port Area is excluded because it is a working industrial waterfront area, regulated by the State of Massachusetts, and controlled by the Massachusetts Port Authority.

PLAN ORGANIZATION

This PLAN is organized into 6 parts, which build on one another.

- **Chapter 1** gives an overview of the PLAN process, goals, and timeline.
- **Chapter 2** is a neighborhood-wide needs analysis, which covers needs ranging from housing to retail access, as well as city services such as schools and libraries.
- **Chapter 3** is a framework plan for the Rutherford Avenue and Sullivan Square areas of the neighborhood, where the most change is occurring. This section takes the learnings and recommendations identified in Chapter 2, and builds them into a strategy for responding to future needs in this area.
- **Chapters 4 and 5** are urban design guidelines for the various geographies of the neighborhood, intended to guide the outcomes of new development as well as smaller scale public realm improvements. Chapter 4 is about the Rutherford Avenue and Sullivan Square areas, building on Chapter 3, while Chapter 5 is about the Original Peninsula and Lost Village areas, and builds on key needs identified in Chapter 2.
- **Chapter 6** focuses on the Charlestown Navy Yard, an area of Boston which has had a significant amount of planning work in the past five decades. This section acts as a compendium of these past plans and highlights recommendations from these plans which remain to be implemented.
- **Chapter 7** is the implementation chapter, collecting all of the recommendations from the previous five chapters into one place, organized by goal, and identifying the implementing city departments, timeline, and strategies.

01

OVERVIEW

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Neighborhood History; Past and Ongoing Planning

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Why We're Planning

¹ U.S. Census Bureau. Population density, Decennial Census, 1980-2020.

WHAT IS PLAN: CHARLESTOWN?

PLAN: Charlestown is a neighborhood wide, comprehensive plan. It is conceived of the goal of Expanded Neighborhoods identified in Imagine Boston 2030 (IB2030). Among other things, IB2030 identifies encouraging housing and job growth, and guiding proactive infrastructure investments to leverage development value. IB2030 specifically names Sullivan Square as a center for this activity. The PLAN will shape the future of the neighborhood, making change and development more predictable, while also tying development to improvements residents need, from infrastructure to neighborhood services. The PLAN includes an analysis of neighborhood needs, new zoning for existing industrial parts of the neighborhood, urban design guidelines to govern future developments, and a summation of planning in the Charlestown Navy Yard.

PLAN: Charlestown was started in 2019 for three key reasons:

- 1) A need for a coordinated response to development pressures and to ensure development is leveraged for community benefit.
- 2) A need for greater connectivity ahead of a new Rutherford Avenue.
- 3) A desire to enhance the existing neighborhood core.

The recommendations laid out in this PLAN are based upon four years of engagement with the Charlestown community, and guided by the BPDA's key principles of Resilience, Equity, and Affordability.

HARNESSING DEVELOPMENT PRESSURE

Charlestown is seeing rising development pressure for several reasons. It is one of the most transit accessible neighborhoods to Downtown Boston in the city, served by two MBTA stations, which are only two stops away from the center of Boston.¹ On foot, one could walk from City Hall to Charlestown's Monument Square in under 30 minutes. However, unlike neighborhoods with similar access to Downtown, like Back Bay and Beacon Hill, population density in Charlestown has remained low for decades. This is largely because much of Charlestown's land around its MBTA stations and along the waterfront are 'zoned' for industrial uses and do not allow housing (figure 2).

From a market perspective, industrial uses around MBTA stations are no longer the most profitable land use, which has prompted a handful of development proposals in recent years around Sullivan Square Station and west of Rutherford Avenue. Simultaneously, problems which development can help address have worsened. A housing crisis has created the need for Boston to add more housing for every income level, city wide. Climate change has made flood resiliency critical for the future of waterfront neighborhoods like Charlestown, and elevated the importance of adding tree canopy to address heat. Increasing population density can also help to attract more local businesses and support main streets, which suffered during and following the COVID-19 pandemic.

PLAN: Charlestown is a comprehensive framework for how development can help provide more affordable housing, open space, resilience, economic opportunity, and access to essential retail and services.

INCREASING CONNECTIVITY

As all Charlestown residents know, there are also only 5 streets for vehicles, all of which are bridges, providing access to the neighborhood: the North Washington Bridge, the Gilmore Bridge, the Alford Street Bridge, the Cambridge Street Bridge, and the Mystic/Maffa Bridge pair (figure 2). This lack of vehicular access makes it essential that future and current Charlestown residents have access to good public transit, a strong bike network, and other resources to help move residents away from reliance on cars. Although Charlestown does have two MBTA stations, a transit hub at Sullivan Square Station, twelve MBTA bus lines which pass through the neighborhood, and a ferry terminal, much of Charlestown remains out of reach of convenient transit, especially the Medford Street corridor and the Charlestown Navy Yard. Where there is transit today, it can be hard to get to.

Charlestown's built fabric is broken by roads and highways which are difficult or unpleasant to cross. Rutherford Avenue separates the western part of Charlestown from the neighborhood core, Chelsea Street isolates the Charlestown Navy Yard, and Interstate 93 isolates the Lost Village area (figure 2). A redesign of Rutherford Avenue is currently underway, discussed further in the Neighborhood Context section of this chapter.

PLAN: Charlestown proposes recommendations to increase connectivity both within the neighborhood, and to surrounding cities, encouraging safer, more pedestrian and cyclist friendly environments.

ENHANCING THE NEIGHBORHOOD CORE AND LOST VILLAGE

Charlestown is Boston's oldest neighborhood, and its existing residential areas are loved by residents new and old alike. The neighborhood's history is a source of pride, but a lack of preservation protections has many residents concerned that the most historic elements of the built fabric might be lost in the future. Additionally, because of the age of the neighborhood, streets are narrow, which has left little room for street trees at a time when tree canopy is key to fighting rising heat levels. The neighborhood core also has very few unbuilt parcels left where new parks might be added. Concerns about street lighting, utilities, and other aspects of the public realm persist.

PLAN: Charlestown includes preservation recommendations, in coordination with the Boston Landmarks Commission, as well as urban design guidelines to influence the future of Charlestown's public realm.

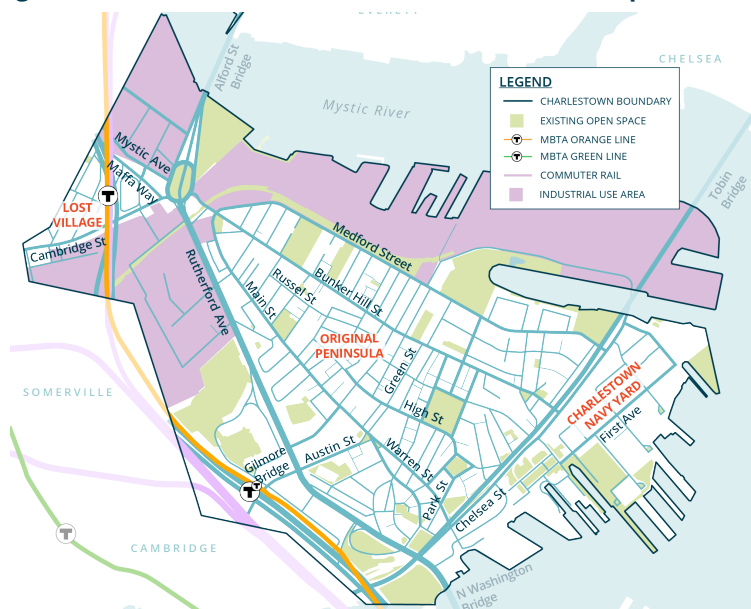


Figure 2

Figure 2. Planning elements map

Planning Context

NEIGHBORHOOD HISTORY

The Boston neighborhood that is known as Charlestown today is the traditional, ancestral, and unceded territory of the Naumkeag, the Massachusetts, and the Pawtucket People.² The area was incorporated by colonists in 1628, and annexed by the City of Boston in 1874.³ Charlestown was originally a peninsula, often called the Original Peninsula, and the neighborhood was expanded by adding urban fill to low-lying, tidal wetland areas (figures 1 and 3). It is these low-lying areas of urban fill which are most at risk of flooding due to sea-level rise and storm surge today, and where much of Charlestown's existing industrial uses are.

Charlestown's history is rich, including revolutionary war battles, massive cultural shifts as different waves of immigration have come to Boston, and a notable fight against demolition during the time of Urban Renewal. Hundreds of pages and significant research and resources would be necessary to do justice to the neighborhood's full history, which this PLAN is not the proper place to attempt. Instead, the PLAN describes portions of Charlestown's history relevant to the planning recommendations as needed throughout this document. For a full history of Charlestown, please refer to the records of the Charlestown Historical Society, the Charlestown Preservation Society, and the Boston Public Library.

² Native Land Digital. "Native Land Digital Map", December 2017. <https://native-land.ca/>.

³ Boston Public Library. "Boston's Annexed Towns and Some Neighborhood Resources: Charlestown." Boston Public Library, Updated: June 29, 2022. <https://guides.bpl.org/TownsOfBoston/Charlestown>.

Figure 3 . Colton, Joseph Hutchins. "Colton's Boston and Adjacent Cities." Map. N/A. New York, New York: G.W. & C.B. Colton & Co., 1869.

Present day outline
of Charlestown

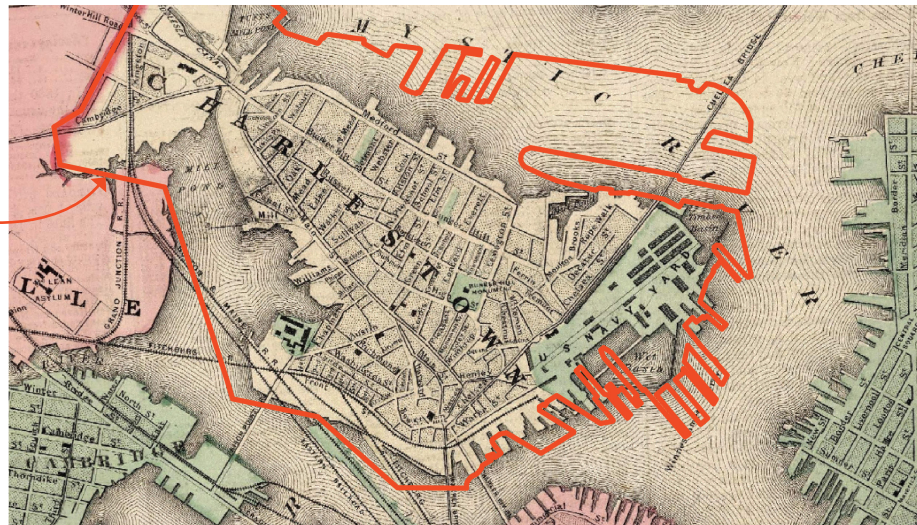


Figure 3

PAST AND ONGOING PLANNING

PLAN: Charlestown is informed by many planning initiatives which came before it, including the citywide plan Imagine Boston 2030, the Sullivan Square Disposition Study, Climate Ready Charlestown Phases I + II, and a series of plans for the Charlestown Navy Yard (see figure 4). Additionally, there is an ongoing redesign project for Rutherford Avenue and Sullivan Square, which the plan is coordinated with.

Imagine Boston 2030 (2017)

Imagine Boston 2030 the citywide comprehensive planning document for the

City of Boston and the guiding document for all PLAN initiatives. It laid the groundwork for future planning more local scales. There is no section specific to Charlestown, but Sullivan Square is emphasized as an area that needed further planning, which PLAN: Charlestown fulfills. Imagine Boston 2030 laid out the possibilities for the future of the area clearly:

“Sullivan Square can become a walkable, mixed-use anchor for the innovation economy, capitalizing on the area’s transit access, publicly owned land, and proximity to growing job centers.”⁴

- Imagine Boston 2030

Sullivan Square Disposition Study (2014)

Building on the potential for Sullivan Square described in Imagine Boston 2030, the Sullivan Square Disposition Study planned for the growth of Sullivan Square, to catalyze the area’s evolution into a vital and walkable, transit-oriented mixed-use neighborhood. The plan intended to operationalize this change through the disposition of several publicly-owned parcels for redevelopment. This disposition study was paused when the Wynn Casino project in Everett began to move forward, and PLAN: Charlestown utilizes the work of the Study as a base, superseding it.

Rutherford Avenue and Sullivan Square Redesign (Ongoing)

\$197 million project funded by the Boston Region Metropolitan Planning Organization’s Transportation Improvement Program to better accommodate nonautomotive transportation modes with a goal of transforming Rutherford Avenue from a highway to a neighborhood-friendly, urban boulevard. The project will include safe pedestrian crossings and connections between the existing neighborhood residential areas and the area west of Rutherford Avenue, as well as the replacement of the Sullivan Square traffic circle with an urban street grid.

Climate Ready Charlestown Phases I + II (2017, 2022)

Climate Ready Charlestown is a framework for critical action to adapt to the impacts of climate change, focusing on coastal flooding and flood pathways within the neighborhood. Phase I covered the geographies of Sullivan Square, and Rutherford Avenue, keying in on the flood pathway from the Mystic River, at Ryan Playground and the Schrafft’s Center Waterfront. Phase II planned for the Charlestown Navy Yard, where a patchwork of City, Federal, and private owners require a coordinated response to rising sea levels. PLAN: Charlestown does not replicate this work, instead reinforcing key recommendations from these plans.

Charlestown Navy Yard Plans (1975-2007)

The Charlestown Navy Yard was transferred to the City of Boston by the United States Navy in 1974. Since then, seven plans have been conducted for the area, making it one of the most planned areas of Boston. These plans are discussed in detail in the Charlestown Navy Yard chapter of this PLAN.

Go Boston 2030 (2017)

Boston’s citywide transportation plan establishing goals, targets, and guiding principles to inform how the City plans, designs, and maintains transportation networks. By 2030, the plans calls for more people to commute by foot, bike, or transit, while drive-alone rates will be halved. Go Boston 2030 also identifies key projects in Charlestown including an enhanced transit hub at Sullivan Square Station, expansion of neighborhood bike lanes and the bike share system, and investments in smart signal technologies in Sullivan Square.

⁴ City of Boston. *Imagine Boston 2030* (Boston, MA: City of Boston, 2017), p. 34.

Figure 4 . Charlestown past plans and area maps. (Top to bottom) Sullivan Square Disposition Study, Rutherford Avenue and Sullivan Square Redesign, Climate Ready Charlestown Phases I & II, and Charlestown Navy Yard Plans

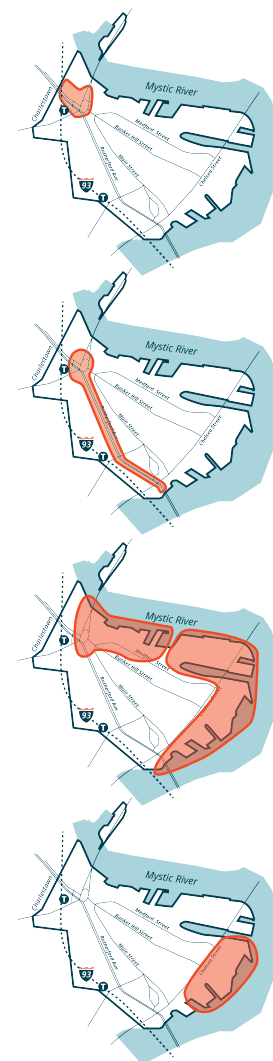


Figure 4

Community Process

⁵ The Advisory Group is not a voting body. Advisory Group members work closely with planning staff to help facilitate and advise on the process. AG members assist in outreach and engagement to other members of the community, review planning materials and recommendations, and amplify and elevate community feedback into the process.

Figure 5 (p.21). Timeline of PLAN: Charlestown community engagement process

Organizations Engaged With:

- *Boston PIC Interns*
- *Charlestown Business Alliance*
- *Charlestown Coalition*
- *Charlestown Historical Society*
- *Charlestown Mothers Association*
- *Charlestown Neighborhood Council*
- *Charles Newtown Board*
- *Charlestown Preservation Society*
- *Charlestown Residents Alliances*
- *Charlestown Youth Soccer Association*
- *Harvest on Vine*
- *Mystic River Watershed Association*
- *Sullivan Square Residents Association*
- *Turn It Around Youth Group*
- *Warren-Prescott School 8th Grade Classes*

PLAN: Charlestown is community guided. The PLAN's neighborhood-wide geography, inclusion of the Needs Assessment chapter, and focus on neighborhood services were all a result of advocacy from residents. Community engagements varied in size and style throughout various phases of the planning process, and included an advisory group of neighborhood residents, public meetings and workshops, informal engagements like walking tours and office hours, and intensive engagement phases with many community events sponsored by other organizations. The live events were also supplemented with surveys, online storymaps, and a comic book, to help reach a broader audience.

ADVISORY GROUP

The PLAN: Charlestown Advisory Group consists of 26 Charlestown residents and community organization leaders, nominated by elected representatives.⁵ The Charlestown Neighborhood Council, Charlestown Coalition, Charlestown Residents Alliance, Charlestown Preservation Society, and many other organizations have seats on the Advisory Group. The Advisory Group met seven times, at crucial points, to give feedback on planning content and direction.

PUBLIC MEETINGS AND WORKSHOPS

PLAN: Charlestown included 20 public meetings and workshops. A concentration of workshops on various topic areas during the 'Visioning + Goals' phase laid the foundation for the PLAN. This phase led to the creation and adoption of the PLAN's vision statement, and set the community priorities which guided the subsequent 'Scenarios' and 'Recommendations' phases. Public meetings during the 'Recommendations' phase gave the community initial recommendations to comment on, for refinement prior to the release of the draft plan.

INFORMAL ENGAGEMENTS

Informal engagements, typically in-person, supplemented the virtual public meetings, giving stakeholders an opportunity to talk to BPDA staff in a casual, conversational setting. 4 walking tours, 14 hours at the Charlestown Public Library, 7 listening sessions, 2 open office hour sessions, and a 'Pints with a Planner' event, all helped give more depth to community feedback.

MAJOR ENGAGEMENT PHASES

Three major engagement phases offered bursts of concentrated community feedback. The first of these was the 2019 '**Pre-Engagement**' phase, which helped to define the extent of PLAN: Charlestown. This phase included 15 events, made up of 'Chats with a Planner' and invitations to community organization meetings. In this "pre-engagement process," the feedback of residents' informed the scope and comprehensiveness of PLAN: Charlestown.

Public meetings and workshops were paused during the 'Scenarios' phase of the process in favor of the '**2022 Scenarios Listening Tour**', an asynchronous engagement strategy to collect feedback on two initial draft scenarios, aimed at formalizing recommendations for zoning. This phase included 17 events, including tabling in the neighborhood, attending community organization meetings, and events with specific group, like Boston Public School students. The '**2023 Hybrid Scenario Listening Tour**' followed the same model. Both of these Listening Tours were supplemented by surveys to collect consolidated feedback.

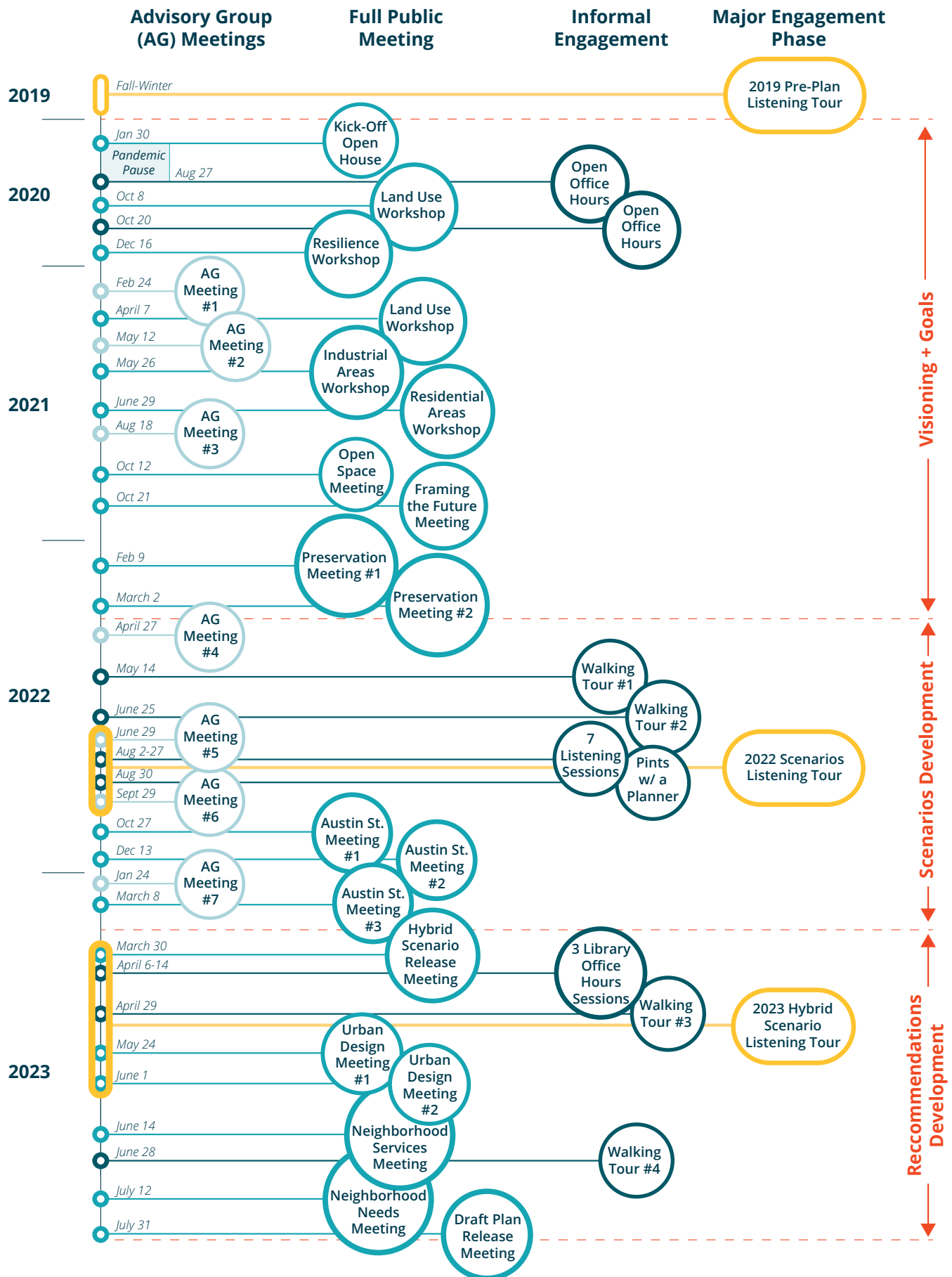


Figure 5

SURVEYS AND FEEDBACK

Many public meetings were supplemented by surveys, in order to give community members an additional feedback option. The two scenarios listening tours each also had a survey component. The 2022 Scenarios Listening Tour included nine surveys across various topics, from streets to open space to land use. In total, 952 survey responses were received. The 2023 Hybrid Scenario Listening Tour included one survey, which received 390 submissions. Results to all the surveys, as well as other forms of feedback such as comment letters, are shared throughout this document, as relevant.



Figures 6-11

Vision and Goals

Figures 6-11 (p.22). Photos of PLAN: Charlestown community engagement, from top left to bottom right:

6) Tabling at Main Street Farmers' Marking, August 2022;

7) Walking Tour through the industrial areas and Lost Village, May 2023;

8) Neighborhood walk and scenario drawing with Boston Public High School students from the PIC, July 2022;

9) Tabling at BHA family Fun Day, August 2022;

10) Pints with a Planner, August 2022;

11) Walking Tour through the Original Peninsula with the Boston Landmarks Commission, June 2022

The PLAN: Charlestown vision statement was co-created with community members to describe the future of Charlestown. Complementing the vision statement are five concrete goals, which served to guide PLAN: Charlestown's focus, process, and recommendations.

VISION STATEMENT

A vision statement is an aspirational view of what residents hope their community will be like in the future, at its very best, which serves as the driving force for planning.

Following an initial series of 7 workshops, a draft vision statement was presented to the Charlestown community with an accompanying survey asking for feedback. 114 responses were received, the majority of which indicated that residents liked the draft statement, but that the emphasis on open space, mobility, preservation, and inclusivity should be strengthened, resulting in the final PLAN vision statement:

"In 2050, Charlestown is a thriving, diverse, accessible, and resilient neighborhood where residents can safely and more easily walk, bike, or bus to new parks, plazas, neighborhood amenities, and active waterfront areas. These improvements unite an enhanced historic residential fabric with new homes and jobs which support small businesses, as well as families of all types, sizes, and income levels."

GOALS

Planning goals are measurable conditions or primary objectives to aim for that help a community achieve their vision over time. The 'Visioning and Goals' engagement phase resulted in the identification of 5 key goals for PLAN: Charlestown

- **Mobility:** Ensure access to travel choices that connect people to key destinations in and out of the neighborhood safely and reliably.
- **Housing:** Expand affordable, sustainable, and diverse housing opportunities that allow existing and future residents to grow up, stay, and age within the community.
- **Climate & Environment:** Enhance and grow Charlestown's collection of green spaces and cultivate a healthy and resilient environment.
- **Urban Form & Public Realm:** Generate new predictable and contextual investment in the built environment that contributes to an active public realm and celebrates the neighborhood's past.
- **Jobs & Businesses:** Grow and strengthen Charlestown's local businesses and job opportunities to create a diverse and resilient economy.

02

NEIGHBORHOOD NEEDS ANALYSIS

PRESENT AND FUTURE NEEDS

26		Introduction	
29		Demographics	<i>Population trends; Future population projection</i>
35		Housing	
42		Retail and Food Security	
48		Open Space and Sports Fields	
56		Climate Resilience	<i>Coastal and storm water flooding; Heat</i>
63		Preservation	
70		Arts and Culture	
74		Mobility	
97		Neighborhood Services	<i>Schools, EMS, Fire, Water and Sewer, Libraries, etc</i>

Introduction

The Neighborhood Needs Analysis for this PLAN is a direct response to Charlestown residents' requests for a more comprehensive approach to planning. It includes broad needs such as housing and open space, as well as needs like safety and health which are fulfilled by neighborhood services such as Boston EMS and the Boston Fire Department. The findings and recommendations shared in this Chapter inform both the Planning Framework and Urban Design Guidelines Chapters which follow.

PROCESS

This Chapter is the product of broad collaboration with other City departments and regional agencies, as well as neighborhood residents and leaders of community organizations. Data, mapping, and an analysis of existing plans, programs, and policies of City of Boston departments formed the basis of the study. This was then supplemented by Charlestown stakeholder interviews, such as with leaders from Harvest on Vine and the Charlestown Business Alliance. Group discussions with residents focused on affinity topics, such as arts and culture, preservation, and open space provided meaningful feedback. Sections of this Chapter were also co-written with partner agencies, such as the Boston Public Library, Boston Public Schools, and Boston Fire Department.

In addition to existing need, this Chapter projects out future need. A population projection estimates the maximum number of residents Charlestown might have by 2050, if every parcel were to build out to the maximum allowed extent possible in the Sullivan Square and Rutherford Avenue areas. The method of estimating population is discussed further in the demographics section of this Chapter. This estimate was used to inform recommendations regarding open space, neighborhood services, and other neighborhood needs Charlestown may have over the next 30 years.

DATA SOURCES

Several data sources are incorporated in this PLAN's Needs Analysis. They include, but are not limited to:

- American Community Survey (ACS) Data 5-year estimates (2006-2010, 2011-2015, 2016-2020, and 2017-2021)
- Decennial Census Data for 1940 to 2020
- Warren Group Real Estate Sales Data
- RentalBeast realMLS data
- Charlestown youth sports enrollment data, contributed by each league
- City of Boston Mayor's Office of Housing, housing units data
- Boston Police Department call volume data
- Boston Public Library data for circulation, wifi usage, and visitors
- City of Boston Vision Zero Crash Records (2019-2021)
- Boston Bikes Count Program data (2016-2022)
- Bluebikes trip data (2022-2023)
- City of Boston Ramp Inventory (2021)
- MBTA Ridership Data (Fall 2022)
- City of Boston Parking Permits data

COMPARISON NEIGHBORHOODS

For the purpose of this analysis, Charlestown is considered in relation to the City of Boston as a whole, as well as several comparison neighborhoods: Back Bay, Beacon Hill, East Boston, and the West End (Figure 12). These neighborhoods were selected due to their geographic proximity to Charlestown and similarities and differences in terms of population, density, and housing characteristics, among other factors. These comparisons help to contextualize Charlestown by pulling together defining characteristics of other neighborhoods that are both familiar or distinctly different from Charlestown's social and physical environment.

Back Bay, Beacon Hill, and Charlestown are historic neighborhoods with a high concentration of historic sites, but have evolved very differently over time, with Charlestown falling behind in terms of neighborhood-wide density. The West End is the closest of the comparison neighborhoods in proximity, but was razed by the City beginning in the late 1950s through the legal powers of urban renewal. Charlestown had some demolition due to urban renewal during that period; however, the scope of demolition in the West End was a more destructive form of urban renewal than what Charlestown experienced, and resulted in the denser built fabric that exists today.⁶ Finally, East Boston is the most similar to Charlestown in terms of building heights and density, but has a very different population and pattern of development. East Boston and Charlestown also share a city council district, and East Boston is going through its own planning initiative, PLAN: East Boston, concurrently with PLAN: Charlestown.

The boundaries for these neighborhoods used in this analysis were determined by using census tracts to approximate the neighborhood areas.

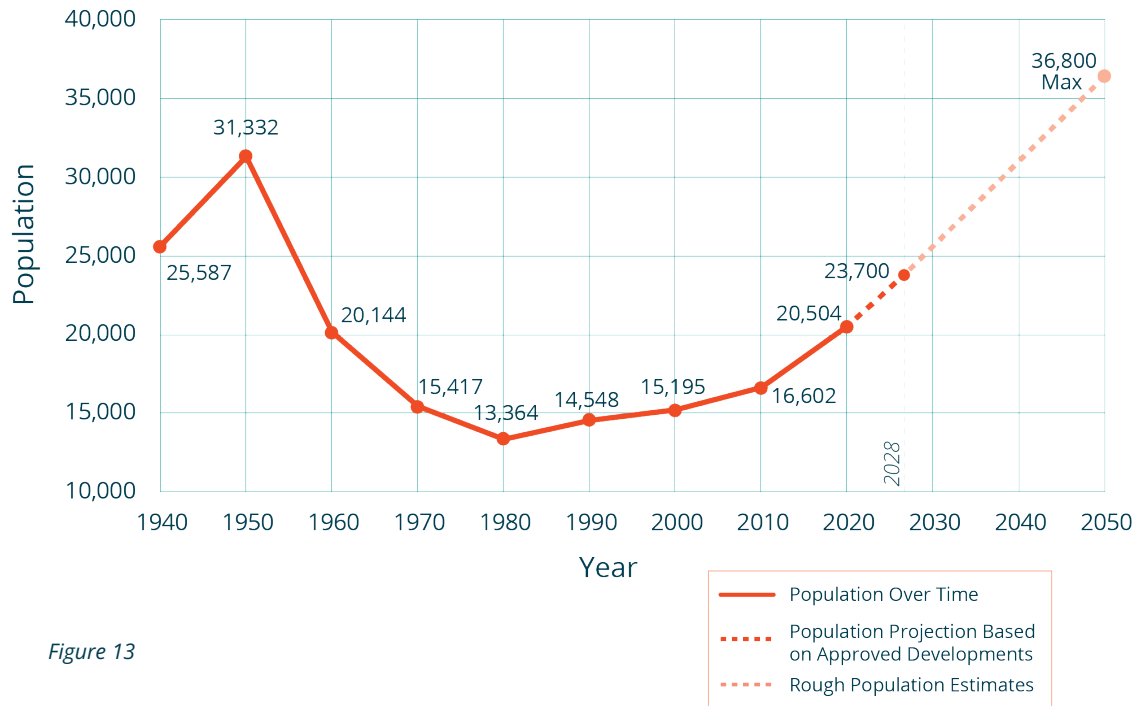
⁶ "The Demolition of the West End." March 24, 2020. Boston.Gov. <https://www.boston.gov/news/demolition-west-end#:~:text=In%20the%201950s%2C%20the%20Boston,primarily%20residential%20area%2C%20as%20overcrowded.>

Figure 12 . Charlestown and comparison neighborhoods map.

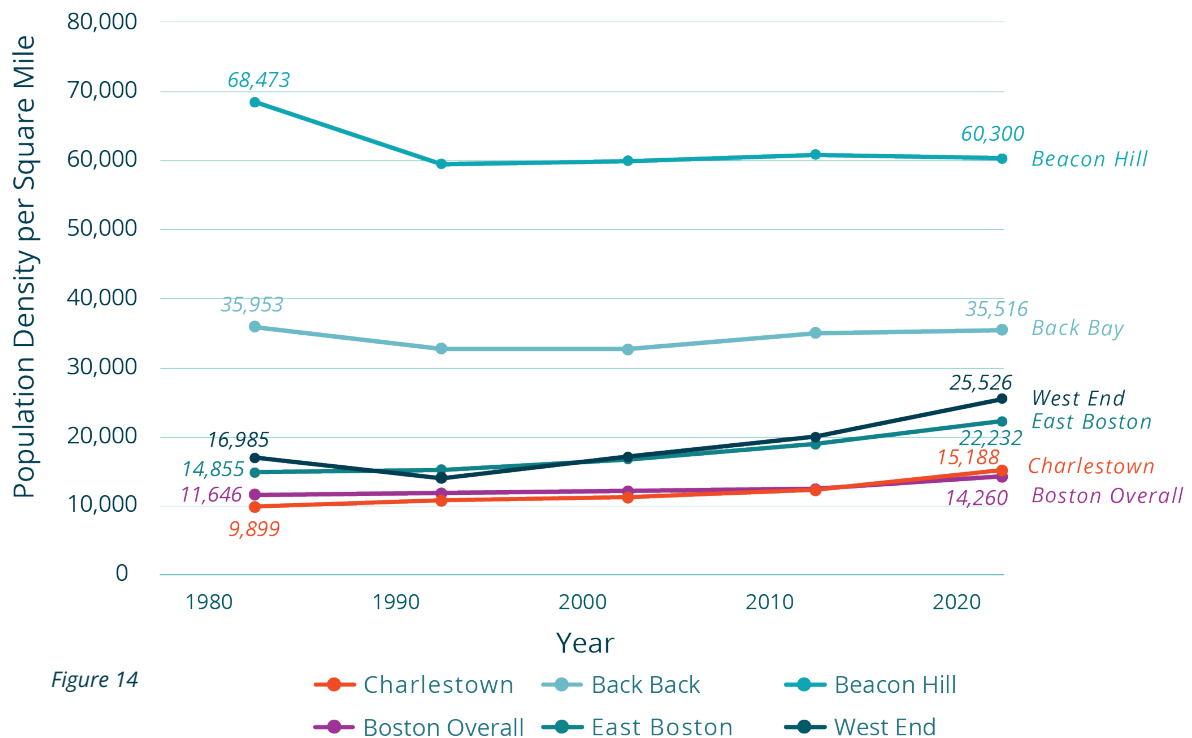


Figure 12

CHARLESTOWN POPULATION OVER TIME AND PROJECTED



COMPARING POPULATION DENSITIES OF BOSTON NEIGHBORHOODS OVER TIME



Demographics

INTRODUCTION

A better understanding of current and future neighborhood needs requires knowledge of demographics factors like age, household size, race, and income. Boston is a city of many distinct neighborhoods, each with its own set of unique characteristics and assets, ranging from building typology and historic structures to ethnic heritage, recreational opportunities, and retail establishments. Maintaining the distinctiveness of Boston's neighborhoods is important, but it is also crucial to create places that are accessible to all. The characteristics of a neighborhood's population can be used to determine how well a neighborhood accommodates a diverse population. This first section of the needs analysis describes Charlestown's present-day population and trends in the population over time. By identifying how the population has changed in recent decades, we can better understand why the neighborhood is populated as it is today and what needs may be met through capital planning and policy-making going forward, which is examined in the subsequent, topical sections of the needs analysis.

⁷ U.S. Census Bureau; Decennial Census 1950-1980

⁸ "Cities See Hyperlocal 'Activity Centers' as Key to Sustainable Growth, Less Car Dependency," Smart Cities Dive. March 21, 2023. <https://www.smartcitiesdive.com/news/sustainable-cities-growth-hyperlocal-activity-centers-less-cars/644902/>.

Figure 13 (p.28). Charlestown Population Over Time and Projected. Source: U.S. Census Bureau; US Decennial Census, 1940-2020. Projected population modeling by BPDA.

Figure 14 (p.28). Comparing population densities of Boston neighborhoods over time. Source: U.S. Census Bureau; US Decennial Census, 1980-2020.

POPULATION - EXISTING

Historically, the population of Charlestown was much higher than it is today. The neighborhood population peaked in 1950 at around 31,000 residents and fell sharply until the 1980's, which generally mirrors a period of population decline citywide from 800,000 in 1950 to approximately 560,000 in 1980.⁷ The population then started to gradually increase again (Figure 13). Today, Charlestown is home to approximately 20,500 residents, which remains nearly 11,000 less in 1950. Planning to increase density in Charlestown's recently industrial areas will accommodate more jobs and residents in the neighborhood. Increased density - including a well-planned street network, complementary mixed uses, and open space - can generate many co-benefits including a more walkable environment, accessible jobs, and new amenities to support both residents and workers.⁸

Charlestown's neighborhood density has stayed relatively consistent over the years, which is likely due in part to residential uses being concentrated in the historic core of the neighborhood where there are very few vacant parcels left to be developed. Of the comparison neighborhoods studied, Charlestown is the least densely populated. The 200+ acres of historically industrial area West of Rutherford Ave, South of Cambridge Street, and East of Medford Street, has little to no housing, which skews population density of the neighborhood downwards, even though the core of the neighborhood may feel dense. At 1.35 square miles, Charlestown is the second largest of the 5 neighborhoods examined as part of this analysis, but nearly 1/3 of a square mile is entirely unpopulated.

POPULATION - PROJECTED

This PLAN projects that by 2050, Charlestown's population has the potential to increase by up to 80%, but likely closer to the population from 1950. The maximum projection assumes that every parcel in the neighborhood would have to be built out to the maximum allowed by the planning framework described in Chapter 3 of this PLAN, and that the majority of the development would be housing. It assumes an average housing unit size of 1,000 square feet, an average residential building efficiency ratio of 80%, and an average household size of 1.7 persons, which is the city average for Article 80 development projects.

AGE

The breakdown of population by age in Charlestown is very similar to the state of Massachusetts as a whole, where approximately 40% of the population is between the ages of 35-64 in both geographies.⁹ The population of children under the age of 18 in Charlestown is also nearly identical to that of the state population, where this age group comprises approximately 20% of the population.¹⁰ Of the comparison neighborhoods studied, only East Boston's proportion of under 18-year-olds is similarly high, while in Back Bay, Beacon Hill, and the West End this number is far below 10%. This data shows what many Charlestown residents have said: that Charlestown is a family neighborhood.

The age distribution of Charlestown has stayed relatively consistent over time, with a couple of notable changes. First, the proportion of the 65-and-older population increased 3 percentage points from 2015 to 2020, equivalent to over an 800-person increase.¹¹ In contrast the population of 18-34-year-olds decreased an entire 5 percentage points, from 33% to 28%, in just 5 years, between 2015 and 2020.¹² While this represents a slight population decrease of just over 140 persons, it reflects a neighborhood that is increasingly older than in past years because it is not attracting younger adults. In other words, while Charlestown's population has grown in recent years, it is more attributed to 65+ individuals as well as middle-aged adults and their children. This could be due to the lack of affordable housing stock, a lack of certain amenities appealing to younger adults, or other neighborhood characteristics which are either failing to attract this very important demographic or making the neighborhood less accessible to them.

RACE AND ETHNICITY

Only 28% of the neighborhood identifies as Hispanic or non-White, which is significantly lower than Boston's overall percentage (55%), and is very similar to that of other wealthier neighborhoods like Back Bay (27.7%).¹³ This shows that Charlestown is likely less accessible to BIPOC populations than other neighborhoods like East Boston, where over 65% of residents identify as Hispanic or non-white. However, the diversity of Charlestown has been steadily increasing since 1990. The proportion of individuals who identify as Hispanic increased from 2% of the population in 1990 to almost 12% in 2000.¹⁴ This decade was a particularly high period of this demographic group's growth in Suffolk County at-large, which saw the proportion of individuals identifying as Hispanic grow from 11% (just under 73,000 residents) in 1990 to 15.5% (over 107,000 residents) in 2000.¹⁵ The most represented minorities in Charlestown today are Asian/Pacific Islander and Hispanic residents, at 10% and 9% of the neighborhood population, respectively.

EDUCATIONAL ATTAINMENT

The share of residents with a college degree in Massachusetts is among the highest in the country, at approximately 44% of adults aged 25 years and older.¹⁶ Charlestown's population is even more well-educated overall with 67% of Charlestown's adult population having earned a bachelor's degree or higher, 25% higher than the citywide percentage.

Notably, the share of college-educated residents has been growing since 1980, following a similar upward trajectory as overall neighborhood population growth. This particularly high degree of educational attainment is reflected in income levels for the neighborhood, explored in the following section.

⁹ U.S. Census Bureau; American Community Survey 5 year estimate, 2020.

¹⁰ Ibid.

¹¹ U.S. Census Bureau; American Community Survey 5 year estimate, 2015 and 2020.

¹² Ibid.

¹³ U.S. Census Bureau; U.S. Census Bureau; US Decennial Census, 2020.

¹⁴ U.S. Census Bureau; U.S. Census Bureau; US Decennial Census, 1990-2020.

¹⁵ Ibid.

¹⁶ U.S. Census Bureau; U.S. Census Bureau; US Decennial Census, 1980-2020.

Figure 15 (p.31). Percent population in Charlestown by age over time. Source: U.S. Census Bureau; US Decennial Census, 2000-2020, and American Community Survey 5 year estimates, 2010, 2015, 2020.

Figure 16 (p.31). Percentage of population identify as BIPOC in Charlestown and comparison geographies over time. Source: U.S. Census Bureau; US Decennial Census, 1950-2020.

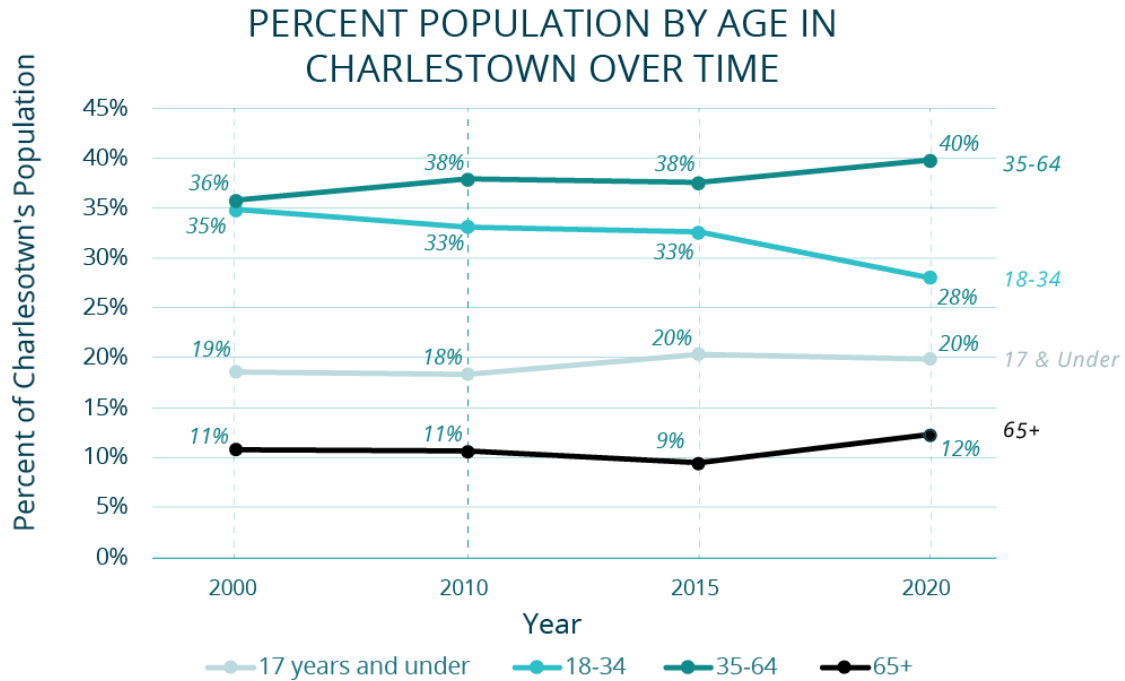


Figure 15

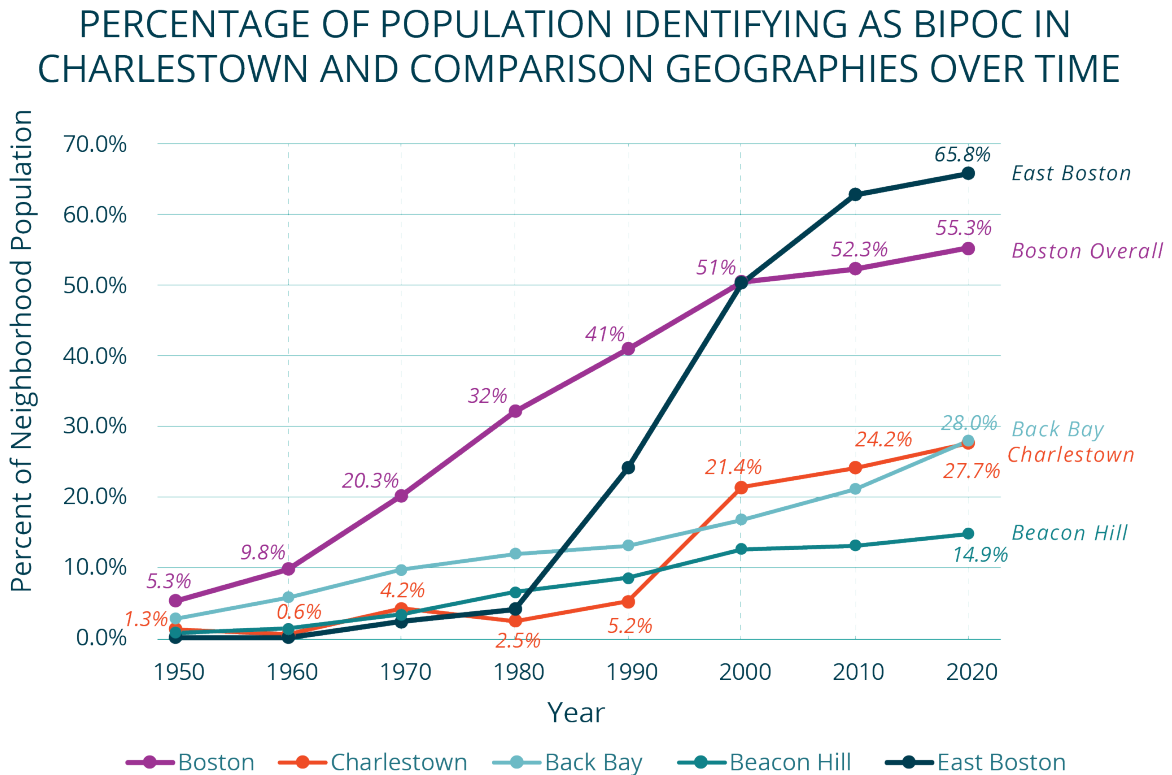


Figure 16

¹⁷ U.S. Census Bureau; American Community Survey 5 year estimates, 2010, 2015, and 2020.

¹⁸ Ibid.

Figure 17 (p.33). Change in household incomes in Charlestown over time. Source: U.S. Census Bureau; American Community Survey 5 year estimates, 2010, 2015, 2020.

Figure 18 (p.33). Share of households living below the poverty line in Charlestown and comparison neighborhoods. Source: U.S. American Community Survey 5 year estimates, 2020.

Figure 19 (p.33). Median household income in Charlestown and comparison geographies, over time. Source: U.S. Census Bureau; American Community Survey 5 year estimates, 2010, 2015, 2020.

INCOME

Increases in household income mirror the increase in the proportion of Charlestown residents with a college degree. Between 2015 and 2020, the ratio of households earning \$200,000 or more per year increased from 16% to 29% of all households.¹⁷ Approximately 60% of Charlestown households earn household incomes over \$100,000. These high-earning households push the median income of Charlestown up to \$131,064, far above the City median of \$89,270 as of 2020, further widening the income gap between Charlestown and the rest of Boston.

It is important to note, however, that Charlestown is a neighborhood with stark income inequality, which has grown in the last 10+ years. Since 2010, the proportion of households earning less than \$75,000 - approximately 60% of AMI for a 3-person household in 2022- has dropped 16%, while the proportion of households earning more than \$100,000 has risen over 65%.¹⁸ This change in neighborhood-wide household income is reflected in higher home prices and rents, which are increasingly out of reach of middle and lower income households. Additionally, 13% of Charlestown families earn incomes below the poverty line, similar to the citywide figure. In Charlestown, several large public housing developments including CharlesNewtown, Mishwaum, and Bunker Hill Housing are helping to keep Charlestown a mixed-income community. Refer to the Housing section of the Needs Analysis Chapter for more information on income-restricted housing in Charlestown.

CONCLUSION

Charlestown's population has changed over the years, affected by many forces addressed in other sections of this needs analysis. These include the availability, type, and cost of housing, neighborhood services and amenities, and transportation access. As much as the residents shape the character of their neighborhood, the housing, amenities, and services neighborhoods have also have an affect on who wants to or who is able to live there. With these population changes, it is incumbent upon city projects and policies to avoid displacement of low-income residents and small business owners.

As explored in this section, Charlestown is gaining an older adult population while losing younger adults, although the under 18 population remains high, indicating that Charlestown is attractive to families. As the neighborhood grows in population, the non-white population of Charlestown is gradually increasing, inciting the need for programming in other Languages Other Than English (LOTE), even as the majority of the neighborhood remains non-Hispanic white.

Lastly, the relationship between educational attainment and income is reflected in high numbers for both indicators, which have been trending higher over the years. This is due to many factors, including the high cost of housing in Charlestown and the neighborhood's proximity to high-earning industries such as scientific research and development facilities. As Charlestown plans for future growth, these existing demographic conditions must inform the ways in which the neighborhood can better serve its existing residents and accommodate new households.

CHANGE IN HOUSEHOLD INCOMES IN CHARLESTOWN

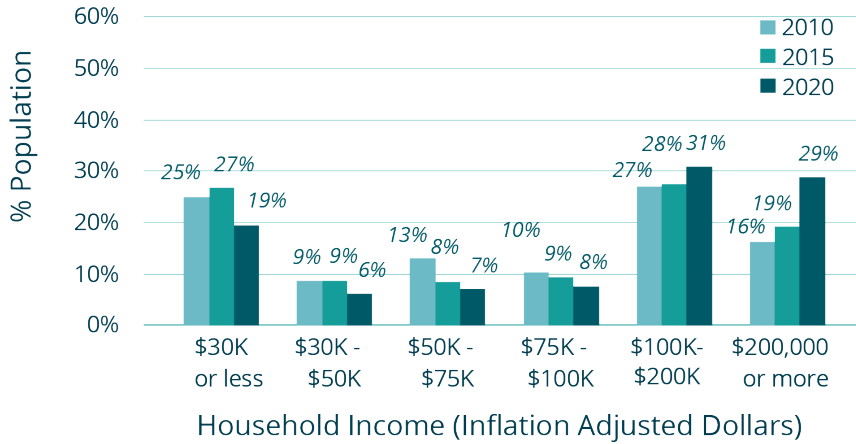


Figure 17

SHARE OF HOUSEHOLDS LIVING BELOW THE POVERTY LINE IN CHARLESTOWN AND COMPARISON NEIGHBORHOODS

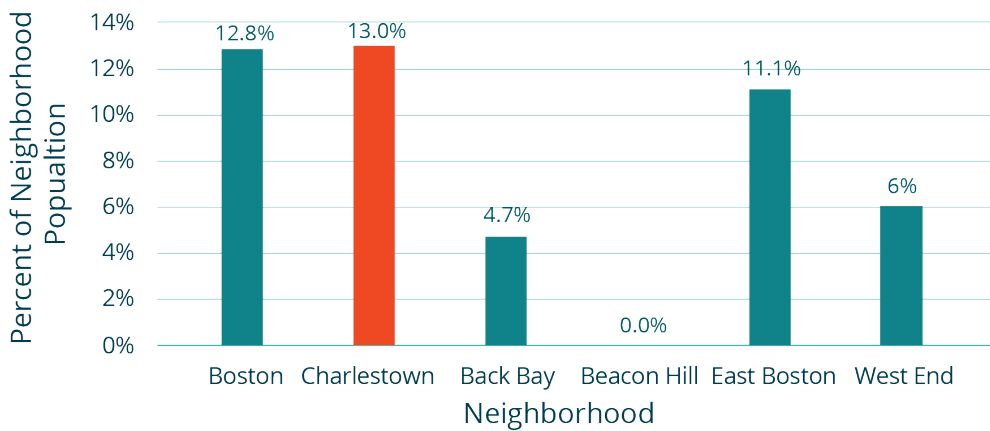


Figure 18

MEDIAN HOUSEHOLD INCOME IN CHARLESTOWN AND COMPARISON GEOGRAPHIES OVER TIME

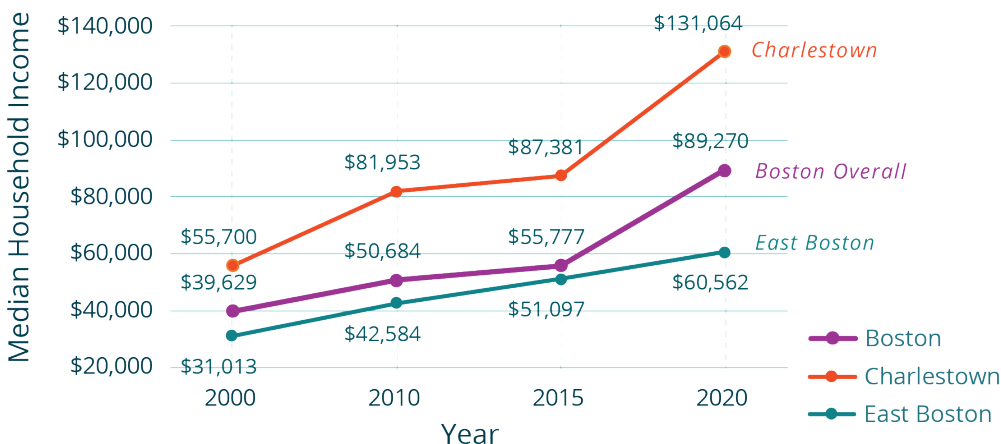


Figure 19

HOUSING DENSITY IN CHARLESTOWN & COMPARISON GEOGRAPHIES, OVER TIME

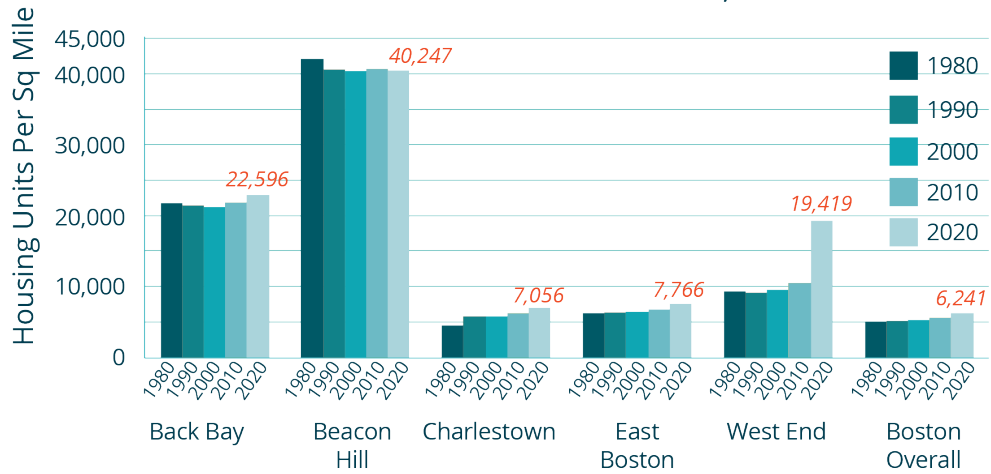


Figure 20

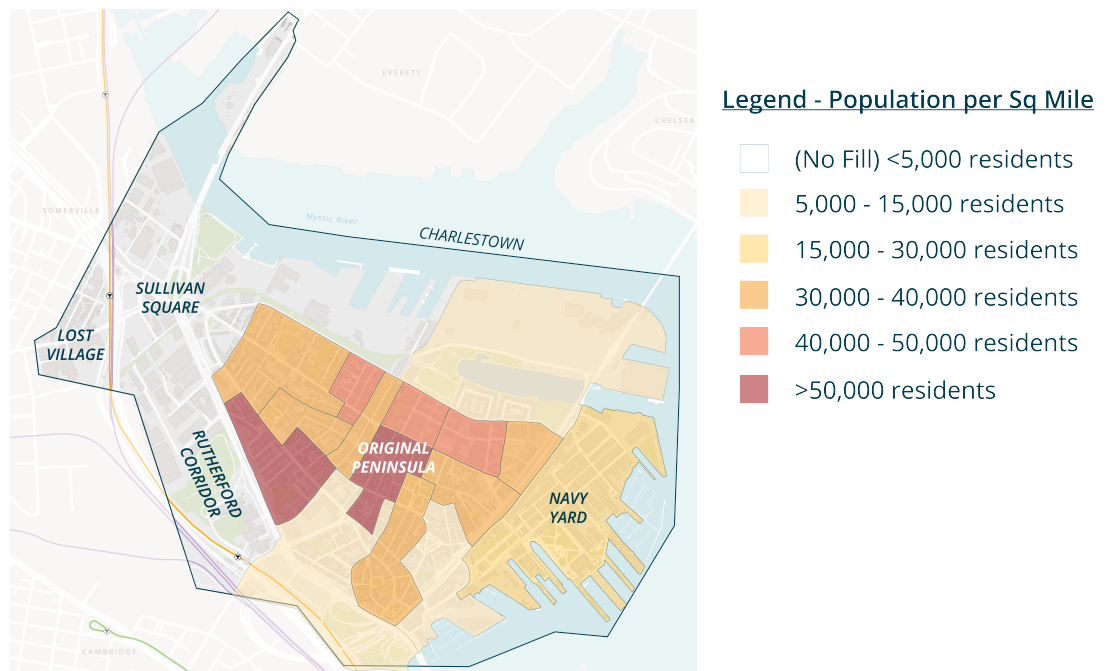


Figure 21

VACANCY RATE IN CHARLESTOWN & COMPARISON GEOGRAPHIES OVER TIME

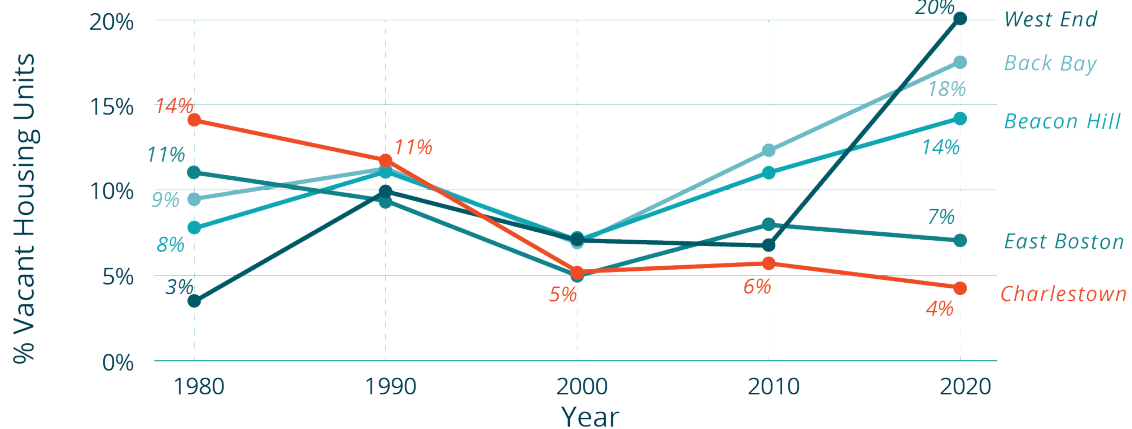


Figure 22

Housing

INTRODUCTION

This section reviews housing need in Charlestown within the context of the larger City of Boston, and in comparison to the neighborhoods of Back Bay, Beacon Hill, East Boston, and the West End. The analysis considers housing that exists today, housing approved to be built, and citywide housing goals and policies. Together, these inform the recommendations included in this section, which in turn inform the planning framework for the Sullivan Square and Rutherford Avenue areas, found in Chapter 3.

CHARLESTOWN'S HOUSING SUPPLY + DEMAND

Housing Units

Over the last 20 years, over 1,700 housing units were added in Charlestown, rising 18% from 7,755 in 2000 to 9,525 in 2020.¹⁹ Citywide, Boston saw about a 16% increase in the number of housing units over the same period. More built out areas, like Beacon Hill, added fewer units, while less dense neighborhoods like Charlestown and East Boston added more. Even with the increase in housing units during this period, Charlestown remained 75% less dense than Beacon Hill, and approximately 50% less dense than Back Bay in housing units per square mile (figure 20).

While quantitatively Charlestown is less dense than Beacon Hill, Charlestown's historic core feels like a neighborhood with a similar built form and housing density to Beacon Hill. The reason for Charlestown's stubbornly low housing density is the hundreds of acres of historically industrial land west of Rutherford Ave, east of Medford Street, and south of Cambridge Street, where virtually no one lives (figure 21). It is in these areas where the addition of more housing units are especially feasible, and which Chapter 3 of this document plans for.

Vacancy Rate

Benchmarks for a healthy housing market generally assume that there should be a vacancy rate of about 6% for rental units, and 1.5 to 2% for ownership units that are for sale.²⁰ A vacancy rate that is higher than these benchmarks can mean there is not enough demand to fill units and there may be a declining population. A vacancy rate that is too low can equate to fewer options for homes that meet the needs of families, less affordability, and a housing market in need of additional supply.

Charlestown has had a stubbornly low vacancy rate since 2000. Even during the pandemic, as vacancy rates soared in Beacon Hill, Back Bay, and the West End to 14%, 18%, and 20% respectively, Charlestown's vacancy rate fell to 4%.²¹ Most vacant units in Charlestown are likely second homes or used as short-term rentals, with 0% of vacant units for sale. The incredibly low vacancy rate points to a more acute housing shortage in Charlestown than Back Bay, Beacon Hill, the West End, or East Boston, which is likely driving home prices and rents up.

Housing Stock

Understanding what kind of housing Charlestown has can help indicate what kind of housing is needed. In Charlestown, only 36% of the rental housing was built before 1940, as compared to 53%, 61% and 80% in Back Bay, East Boston,

¹⁹ The Boston Foundation, Boston Indicators, and The Boston University Initiative on Cities (IOC). Rep. The Greater Boston Housing Report Card 2022 with a Special Analysis of Equity in Subsidized Housing. Boston, MA: The Boston Foundation, 2022. https://www.tbf.org/-/media/tbf/reports-and-covers/2022/october/gbhrc2022_interactive_web.pdf

²⁰ U.S. Census Bureau; Decennial Census, 2000 and 2020

²¹ U.S. Census Bureau; Decennial Census, 2000; and American Community Survey 2016-2020 5-Year Estimates

Figure 20 (p.34). Housing density in Charlestown and comparison geographies, over time, chart. Source: U.S. Census Bureau; Decennial Census, 1980-2020.

Figure 21 (p.34). Population density in Charlestown in 2020 by block group. Source: U.S. Census Bureau; Decennial Census, 2020.

Figure 22 (p.34). Vacancy rate in Charlestown & comparison geographies over time. Source: U.S. Census Bureau; Decennial Census, 1980-2020.

and Beacon Hill respectively.²² While Charlestown has many historic buildings, the rental stock is newer overall than these comparison neighborhoods. Even with this being the case, 74% of rental units in Charlestown were built before 1980, and should be tested for lead paint. For eligible homeowners, the City of Boston provides assistance for lead paint removal.²³ Homes built before 1986 may also have water service from lead pipes. See the City of Boston's [Lead Poisoning Prevention](#) web page for more information.

Over 53% of housing units in Charlestown are in small buildings with 4 or less housing units.²⁴ This is a far higher percentage than the West End, Back Bay, and Beacon Hill, which have 3%, 15%, and 32% respectively. This prevalence of smaller residential buildings likely contributes to the lower population density of Charlestown than these other neighborhoods. In the last 15 years there has been an increase in the number of housing units in Charlestown that are within 50+ unit buildings, which can partially be explained by the completion of several larger project like the Mezzo Design Lofts (146 units; 2008) and the Graphic Lofts (171 units; 2019).²⁵ Simultaneously, there was an increase of 150 units in one and two-family structures in Charlestown between 2010 and 2020, showing that growth has been happening at many different scales.

“Please require more family housing, 2 to 3+ bedroom units that can be used by families long term. The area adjacent to the highway/T should try to focus on large scale commercial/residential development to try and hide the highway. Focus on families in Charlestown, this is where everyone comes to start their life, but the housing here doesn’t allow for families to stay here. They outgrow their homes and move to the suburbs.”

- Charlestown Resident; August 2nd, 2022.

The desire for family housing is something that community members expressed frequently during this planning process. While families take many forms, two-bedroom housing units are generally understood to be the smallest possible for families to live in. Units with more bedrooms allow for larger families and for family growth over time. 67% of Charlestown's housing units have 2+ bedrooms, which is much more than neighborhoods like Beacon Hill, but less than East Boston (figure 23).²⁶ At the same time, only 5% of Charlestown's housing units are studios, as compared to 7% and 17% in East Boston and Beacon Hill respectively. Renters and owners living alone, families with no children, and single parents with children represent the largest categories of cost-burdened households, citywide.²⁷ Charlestown is in need of housing along both ends of the size spectrum, from studios for 1-person households, to larger, multi-bedroom units.

Most development proposals today are composed of mostly smaller units, as for-profit developers try to maximize their return on investment. The City uses its Boston Interagency Fair Housing Development Committee (BIFDC) development review process to prioritize larger units with 2, 3, and 4+ bedrooms.²⁸ Boston needs more smaller housing units to support the most cost-burdened households, which tend to be smaller, but developers in Charlestown should also be pushed to include a higher proportion of larger, family-sized housing units as, without advocacy, very few 3+ bedroom units are likely to be built.

Charlestown's housing stock is 47% owner-occupied, with the rate increasing significantly since 1990.²⁹ Charlestown's ownership rate is significantly higher than the comparison neighborhoods of Back Bay, Beacon Hill, East Boston, and the West End, as well as Boston overall, which only has an owner-occupancy

²² U.S. Census Bureau; American Community Survey 2020 5-Year Estimates

²³ City of Boston. “Get Financial Help to Remove Lead from Your Home.” Boston.gov, Updated: December 19, 2022. <https://www.boston.gov/departments/housing/boston-home-center/get-financial-help-remove-lead-your-home>.

²⁴ U.S. Census Bureau; American Community Survey 2020 5-Year Estimates

²⁵ U.S. Census Bureau; American Community Survey 2005, 2010, 2015, 2020 5-Year Estimates

²⁶ U.S. Census Bureau; American Community Survey 2020 5-Year Estimates

²⁷ City of Boston, Boston Housing Conditions & Real Estate Trends Report 2022 § (2022).

²⁸ City of Boston. Boston to become first major city in the nation to include fair housing requirements in zoning code. December 9, 2020. <https://www.boston.gov/news/boston-become-first-major-city-nation-include-fair-housing-requirements-zoning-code>

²⁹ U.S. Census Bureau; Decennial Census, 1990-2020.

Figure 23 (p.37). Mix of housing unit sizes in Charlestown & comparison geographies, in 2020. Source: U.S. Census Bureau; American Community Survey 2016-2020 5-Year Estimates.

Figure 24 (p.37). Percent of owner-occupied housing units in Charlestown & comparison geographies over time. Source: U.S. Census Bureau; Decennial Census, 1980-2020.

rate of 35%. Charlestown's home ownership rate is high compared to the rest of the city, but many in the community do not believe it is high enough. In a PLAN: Charlestown survey, of 91 respondents, about 35% indicated a desire for new development to include an equal amount of rental and ownership units, while 51% had a slight or a strong preference for home ownership.

MIX OF HOUSING UNIT SIZES IN CHARLESTOWN & COMPARISON GEOGRAPHIES, IN 2020

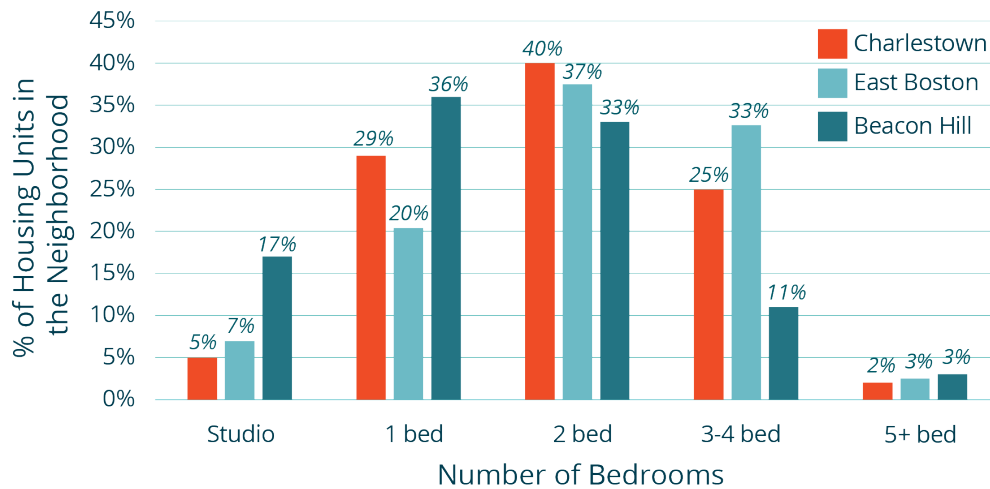


Figure 23

PERCENT OF OWNER-OCCUPIED HOUSING UNITS IN CHARLESTOWN & COMPARISON GEOGRAPHIES OVER TIME

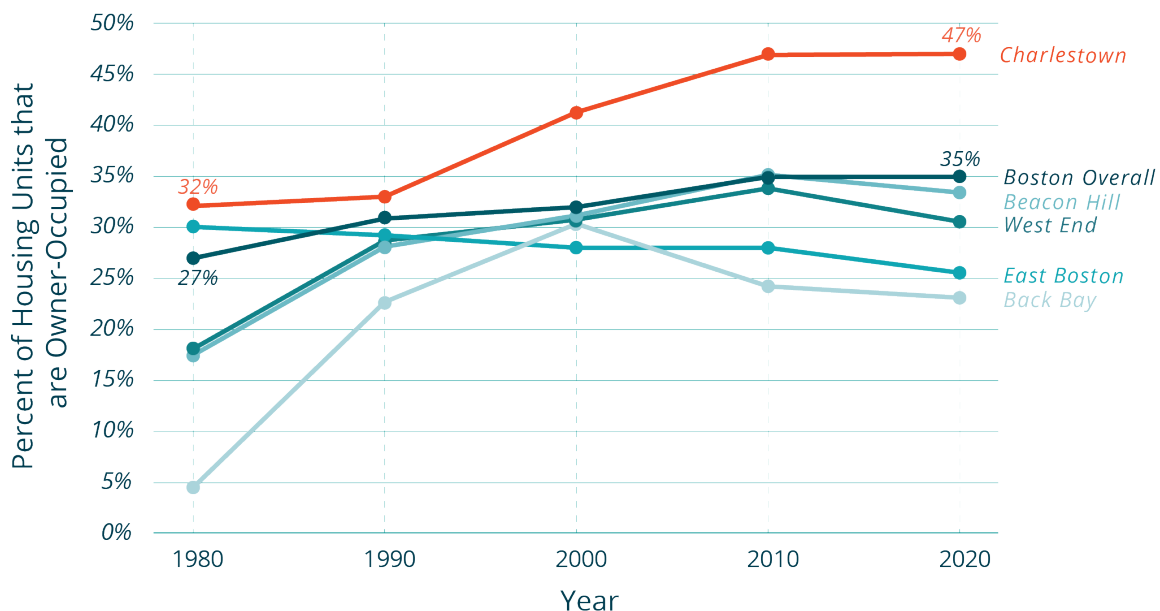


Figure 24

³⁰ Warren Group sales record data provided by the City of Boston Mayor's Office of Housing.

³¹ Bankrate. "How much house can I afford?". Accessed July 27, 2023. <https://www.bankrate.com/real-estate/new-house-calculator/>

³² U.S. Census Bureau, QuickFacts: Boston city, Massachusetts § (2021). <https://www.census.gov/quickfacts/fact/table/bostoncitymassachusetts/INC110221>

³³ U.S. Census Bureau; American Community Survey 5-Year Estimates, 2020

³⁴ U.S. Census Bureau; Decennial Census 2000, and American Community Survey 5-Year Estimates, 2010 and 2020

³⁵ U.S. Census Bureau; American Community Survey 5-Year Estimates, 2020

³⁶ City of Boston, Boston Housing Conditions & Real Estate Trends Report 2022 § (2022).

³⁷ U.S. Census Bureau; American Community Survey 5-Year Estimates, 2020

³⁸ Averages weighted to match bedroom composition of units by neighborhood in ACS 2017-2021 5-Year Estimates. Data includes studios, 1-, 2-, and 3-bedroom listings. Source: City of Boston, Mayor's Office of Housing (MOH) using Rental Beast, January 2023.

Figure 25 (p.39). Median house sales price in Charlestown, East Boston, & Boston overall, over time. Source: Warren Group sales record data provided by the City of Boston Mayor's Office of Housing; BPDA Research Division Analysis

Figure 26 (p.39). Rent costs in Charlestown & comparison geographies in 2020. Source: U.S. Census Bureau; American Community Survey 2020 5-Year Estimates

HOUSING COST BURDEN

Home prices have skyrocketed in Boston since 1990, especially since 2009 (figure 25). Charlestown's median home sale price was \$875,000 in 2022, \$145,000 higher than Boston's.³⁰ To afford the median home price of \$875,000 in Charlestown, a buyer would need an annual household income of about \$250,000, depending on interest rate and other factors.³¹ For comparison, in Boston the median income is less than one-third of that, at \$81,744.

In 1990, 87% of Charlestown's home values were reported to be below \$300,000. By 2020, only 2% of homes were reported in that range.³² More than 1 in 4 homes in Charlestown are valued above \$1 million dollars today. At the same time, Charlestown households have had a falling rate of mortgage burden. Housing cost burden is the proportion of a household's pre-tax income that is used to pay for their mortgage, property taxes, and utilities. Any households spending more than 30% of their income on these housing related costs are considered mortgage burdened. In 2000, 35% of Charlestown households were mortgage burdened; by 2010, it was up to 40%; by 2020, it had fallen to 19%.³³ While the goal is to have zero mortgage burdened households, 19% is lower than Beacon Hill, Back Bay, East Boston, and the West End, which had rates of 30%, 37%, 48%, and 52% respectively in 2020.

The reason for Charlestown's comparatively low mortgage burden rate is not that homes in the neighborhood are affordable, but that Charlestown is increasingly attracting higher-income households. Lower-income families are likely not able to afford to remain in or move into the neighborhood. It is also possible that Charlestown's long tenure rates for occupied units - over 60% of occupied housing units were moved into in 2014 or earlier - mean that there are more long-term homeowners with less mortgage burden than more recent home buyers.³⁴

For renting households, 39% in Charlestown are housing cost burdened. 16% are severely rent-burdened, spending over 50% of their income on home related costs.³⁵ In Boston, single-parent households, single people living alone, and BIPOC renters tend to be the most rent-burdened groups.³⁶ Addressing affordable housing for renter households is a key equity issue, which increasing the housing supply alone will not address.

Rental units make up just over half of the housing units in Charlestown, and 75% of them are 1 or 2-bedroom units.³⁷ There is a better mix of rent prices in Charlestown than in any of the other comparison neighborhoods, likely due to the high proportion (41%) of income-restricted rental units in the neighborhood (figure 26). Market rate rents are, on average, over \$3,300 per month in Charlestown, which is higher than East Boston (\$2,690) and Beacon Hill (\$3,116) and, but lower than Back Bay (\$3,737) and the West End (\$3,831).³⁸

“Those of us that grew up here do not have many ownership opportunities due to high market rents and housing costs.”

- Charlestown Resident; September 14, 2022

“Housing is important, especially more affordable ownership. This type of housing has been sorely missing in Charlestown's inventory.”

- Charlestown Resident; July 29, 2022

MEDIAN HOUSE SALES PRICE IN CHARLESTOWN, EAST BOSTON, & BOSTON OVERALL, OVER TIME

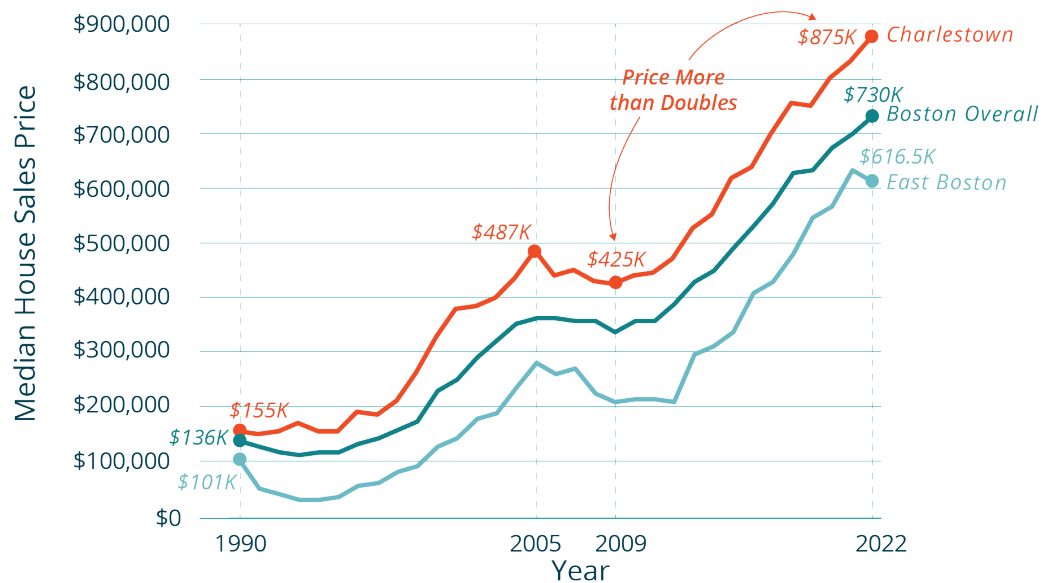


Figure 25

RENT COSTS IN CHARLESTOWN & COMPARISON GEOGRAPHIES IN 2020

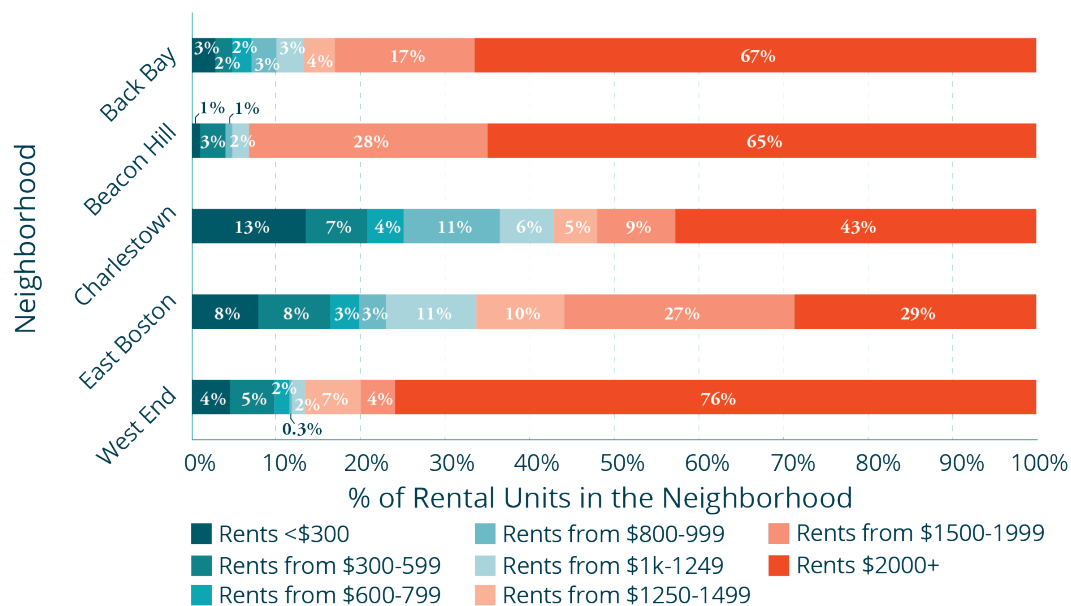


Figure 26

³⁹ City of Boston, Income-Restricted Housing in Boston 2021 § (2021). https://www.boston.gov/sites/default/files/file/2022/04/Income%20Restricted%20Housing%20Report%2C%202021_0.pdf

⁴⁰ BPDA Research Division 2030 Population and Housing Projections, 2023

⁴¹ U.S. Census Bureau, American Community Survey, 5-year Estimates, 2020. BPDA Research Division Analysis.

Figure 27. Number of income-restricted housing units in Boston neighborhoods, 2021. Source: City of Boston, Mayor's Office of Housing, "Income restricted housing in Boston 2021". https://www.boston.gov/sites/default/files/file/2022/04/Income%20Restricted%20Housing%20Report%2C%202021_0.pdf

INCOME RESTRICTED HOUSING

Subsidized income-restricted housing is typically created and maintained through a combination of federal, state, and city funds and programs. In addition, the City requires most private development to create unsubsidized income-restricted housing through the City's Inclusionary Development Policy (IDP). In 2021, the Mayor's Office of Housing reported that the City invests approximately \$70 million per year for the preservation of existing and production of new income-restricted housing.³⁹ Affordable housing is typically for households making at or below a certain percentage of the Area Median Income (AMI).

Of all Boston neighborhoods, Charlestown ranks 4th in terms of the proportion of rental housing units in the neighborhood that are income restricted (43%), and 9th in terms of the total number of income-restricted units in the neighborhood (2,405 units) (figures 27). Of the income restricted housing units in Charlestown, only 109 (4.5%), are home-ownership. Across rental and ownership housing units combined, only about 25% of Charlestown's housing stock is affordable.

Most of the affordable housing in Charlestown is located in the BHA's Bunker Hill Housing (1,100 units), the CharlesNewtown Co-operative (262 units), and Mishawum Park (337 units). Both CharlesNewtown and Mishawum Park are resident-owned communities. At the time of this plan's writing, Bunker Hill Housing's conditions are poor, and the housing has been approved for redevelopment. 1,599 new market rate units are intended to be constructed to pay for the rebuilding of the existing 1,100 affordable units. This project, which is rebuilding nearly half of the Charlestown's affordable housing, is key to ensuring that Charlestown remains a neighborhood for Bostonians of all income levels and that the families living at the existing BHA Bunker Hill housing have healthy, safe, and accessible homes.

Looking ahead, it is estimated that 21% of households that will contribute to projected citywide growth through the year 2030 will be low-income (<80% of Area Median Income (AMI)).⁴⁰ Of current low-income households, approximately one-third are headed by a resident aged 65 or older; this share is projected to rise as the population ages.⁴¹ Low-income senior households are also among

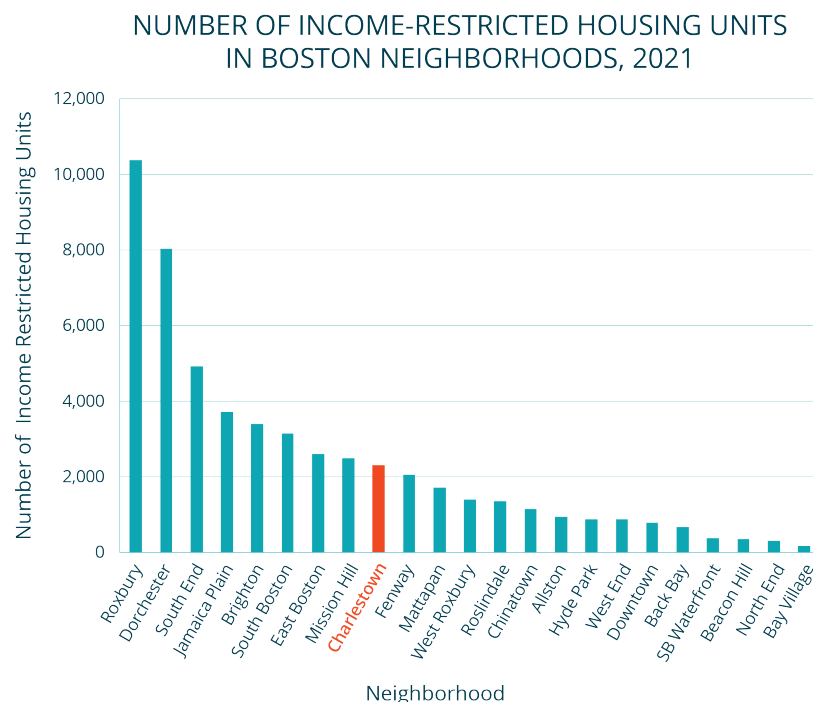


Figure 27

the most cost burdened in the city.⁴² This group not only needs appropriate affordable housing, but also integrated services.

New development is the main way that new affordable housing is added in Boston. The currently low-density, historically industrial parts of Charlestown present an enormous opportunity to provide more housing that Boston residents can afford. For new development here, there is less need to replicate the historic scale or pattern of housing elsewhere in Charlestown, and there is no risk of direct displacement since it's not a residential area. Residential developments in Charlestown are required to meet city-wide policies and standards, discussed in the next section.

THE DEVELOPMENT PIPELINE

As of the release of this plan, three development projects which include housing units in Charlestown have been approved by the BPDA board, but are not yet built: the Bunker Hill Housing Redevelopment, Hood Park, and 1-2 Thompson Square. Together they represent up to 1,778 new housing units, an 18% increase in residential units in the neighborhood.

In addition, a number of projects are proposed for development in the neighborhood. These include One Mystic Avenue (approx. 503 residential units), 40 Roland Street (approx. 124 residential units), and 425 Medford Street (approx. 510,300 sq ft of residential units).

RECOMMENDATIONS

PLAN: Charlestown seeks to address Boston's housing shortage by allowing more housing in certain parts of the neighborhood, and prioritizing the kinds of housing that residents want and need. In summary, the key recommendations of this analysis are to:

1. Increase the number of housing units in the historically industrial areas of Sullivan Square and along Rutherford Avenue, where housing density is low today.
2. Update the zoning code to allow housing wherever feasible, to densities that will encourage the creation of income-restricted housing, especially new developments that are required to follow the City of Boston's Inclusionary Development Policy and would result in more affordable housing units.
3. Amend the zoning code to incentivize affordable housing while minimizing the need for variances or other permitting burdens, such as by establishing an alternative path in Article 80 for the review of income-restricted developments. This recommendation aligns with Mayor Wu's Executive Order.
4. Prioritize the creation of larger housing units with 3+ bedrooms to create opportunities for families in new development as appropriate. Units with fewer bedrooms are also needed, as many of Boston's most cost-burdened households are smaller.
5. Use City policies, funding, and land to ensure developers increase the supply of income-restricted homeownership opportunities in Charlestown, where buying a home is largely unaffordable to below-median-income households. This recommendation aligns with Housing Boston 2030's goal to advance wealth-building through homeownership, especially for BIPOC households for whom homeownership rates are below the city average.
6. Use Boston's Affirmatively Furthering Fair Housing (AFFH) zoning ordinance to strengthen fair housing and anti-discrimination efforts. The AFFH process for large project review assesses local housing composition. This tool can ensure opportunities for voucher holders.

⁴² City of Boston, Boston Housing Conditions & Real Estate Trends Report 2022 § (2022).

City of Boston Housing Related Departments:

The Mayor's Office of Housing (MOH)

*Related policies and
programs include:*

- *Inclusionary Development Program (IDP)*
- *MOH Housing Resources*
- *Citywide Land Audit*

*For more information, refer
to Appendix A.*

Retail and Food Security

INTRODUCTION

Charlestown's retail options are varied and dispersed in pockets throughout the neighborhood. Local retail services not only serve daily needs, but also facilitate community building and activate streets. Residents' feedback about retail has centered on four concerns: 1) the loss of small businesses; 2) vacant storefronts; 3) missing essential retail like laundromats, and 4) a lack of food options. While private developers ultimately make the final tenanting decisions for their dedicated retail spaces, zoning dictates what kinds of businesses can operate in certain areas, and the BPDA can encourage developers to reserve a portion of their retail space to serve an unmet need or request specific mitigation for development projects to fund a new retail location outside of their project.

A related and overlapping need analyzed in this section is food security. The City of Boston's Mayor's Office of Food Justice (MOFJ) defines food access through a multi-pronged lens as "having adequate access to fresh, healthy food through affordability, physical accessibility, and cultural connectedness."⁴³ Many factors go into this, such as the quality and variety of food access in and around a community, the ability of individual households to afford a nourishing and adequate diet, and the transportation access to reach affordable and healthy food options. Access to grocery stores, food pantries, affordable and healthy restaurants, and bodegas all contribute to food security, while overlapping with this section's retail analysis.

RETAIL

Existing Essential Retail

Retail can make a neighborhood more dynamic and attractive to live in. Some retail is essential and supplies fundamental and frequent needs, such as access to food, healthcare, household supplies, and financial services. Some retail types are also less essential to have nearby. Grocery stores and food and beverage establishments, although essential, are covered later in this section.

Health clinics and pharmacies are essential neighborhood services for residents to access medical providers, prescription and nonprescription medicine, and receive immediate medical care if necessary. Charlestown only has one pharmacy, located in the Bunker Hill Shopping Mall, and two health care clinics.

Household services supply a range of domestic needs from home improvement supplies, home furnishings, and cleaning services. There is a dry cleaner but no laundromat in the neighborhood. This absence is a challenge for households without access to a laundry facility in their building. A recently approved development, 420 Rutherford Ave, included the funding and building of a laundromat for the neighborhood, but delivery of the laundromat is tied to the project construction timeline. Other household retail businesses include a hardware store in the Bunker Hill Mall and bike shop west of Rutherford Avenue.

For fitness establishments, there are 2 yoga studios and 2 fitness class studios, but only one 'open gym' - the Charlestown YMCA - located within the Charlestown Navy Yard. The YMCA is not centrally located in the neighborhood, and as the population increases, more 'public' gyms will be needed.

⁴³ City of Boston, Mayor's Office of Food Access, Mayor's Food Access Agenda 2021-2023 § (2021). <https://www.boston.gov/sites/default/files/file/2021/04/Mayor%27s%20Food%20Access%20Agenda%202021-2023.pdf>

City of Boston Retail Related Departments:

The Mayor's Office of Economic Opportunity and Inclusion (OEI)

The Office of Small Business Development

Policies and programs include:

- The Childcare Entrepreneur Fund
- The Legacy Business Program
- The Outdoor Dining Program
- ReStore Boston

For more information, refer to Appendix A.

Existing Non-Essential Retail

This section inventories the existing non-essential retail services in Charlestown and identifies potential gaps that could be addressed through development and added to the neighborhood, especially in parts of the neighborhood where growth is anticipated in the coming decades. There are several categories of non-essential retail that have been identified in Charlestown, which enhance the quality of life for Charlestown residents but are generally elective in nature.

In Charlestown there are 8 personal care establishments (salons, barbers, etc), 4 clothing stores, and 5 convenience stores. These non-essential uses are highly clustered along Main Street and Bunker Hill Street.

Missing retail types in Charlestown identified by both the Charlestown Business Alliance and local residents include a bookstore, furniture store, sporting goods store, a music shop, and several other specialty store types which may be opportunities for future local businesses. Some of these needs are met by other stores nearby, such as at Assembly Square in Somerville or the Gateway Shopping Center in Everett. As Charlestown's population and, by extension, foot traffic increases, smaller, more niche businesses may become more viable in the neighborhood.

Figure 28 . Existing essential retail in Charlestown map.

“I support any measures to create a 24/7 Charlestown without areas that are ‘dead’ at night or areas that are devoid of retail”

***- Charlestown Resident,
Aug 8, 2022***



Figure 28

⁴⁴ U.S. Census Bureau; American Community Survey, 2020, 5-Year Estimates

Figure 29. Percent of households receiving food stamps/snap benefits in the past 12 months. Source: U.S. Census Bureau; American Community Survey, 2020, 5-Year Estimates

City of Boston Food Related Departments:

The Mayor's Office of Food Justice

Policies and programs include:

- Boston Double Up Food Bucks
- Boston Summer Eats
- Good Food Purchasing Program Ordinance
- Farmers Market Coupons Program

The Mayor's Office of Urban Agriculture (GrowBoston)

Policies and programs include:

- The Grassroots Program

For more information, refer to Appendix A.

Challenges: Retail Loss + Vacant Storefronts

Most retail in Charlestown today is concentrated along Main Street and, to a lesser extent, Bunker Hill Street (figure 28). A major concern heard from neighborhood residents throughout the planning process is that several local businesses have been lost, especially in the wake of the COVID-19 pandemic, and that there are storefronts sitting empty. Jenny's Pizza, Charlestown Tea & Treats, and Old Sully's bar are examples from recent years. To some extent, market forces and high rent prices may be to blame. The City of Boston's Office of Small Business Development has several programs to support local businesses through grants, signage and design assistance, and other programs listed later in this section. However, low foot traffic or a real estate market which prioritizes housing as a more profitable use are difficult forces to fight. Increases to the neighborhood's population will help to support businesses, but zoning may also be a tool to combat the loss of some retail.

There are two zoning subdistricts in Charlestown where both ground floor retail and residential uses are allowed: Local Convenience (LC) and Neighborhood Shopping (NS). Most of Charlestown's businesses exist in one of these two subdistrict types (figure 28). Presently, if a property owner wishes to convert a building they own from business on the ground floor to housing, no zoning restrictions exist to prohibit the change, which means no zoning variances are needed, and the BPDA, the Zoning Board of Appeals (ZBA), and residents are not able to oppose the project on the grounds of lost retail. A key retail related recommendation of this PLAN is to change Charlestown's zoning code to make it harder for retail to be replaced with residential uses. This proposed change is described in greater detail in the Implementation Chapter of this document.

THE DEVELOPMENT PIPELINE

As of the release of this plan, three projects which include retail space, have been proposed for development in Charlestown. They include: 40 Roland Street, 425 Medford Street, and 66 Cambridge Street.

FOOD SECURITY

Who is Food Insecure?

One of the most reliable indicators of food insecurity in a community is the enrollment rate for income-qualified voucher programs like the Supplemental Nutrition Assistance program (SNAP) and the Healthy Incentives Program (HIP). As of 2020, 14% of households in Charlestown were enrolled in a SNAP program, higher than Back Bay, Beacon Hill and the West End's enrollment, but lower than East Boston and the City of Boston's enrollment rates.⁴⁴ In Boston, two and three-

PERCENT OF HOUSEHOLDS RECEIVING FOOD STAMPS/SNAP BENEFITS IN THE PAST 12 MONTHS

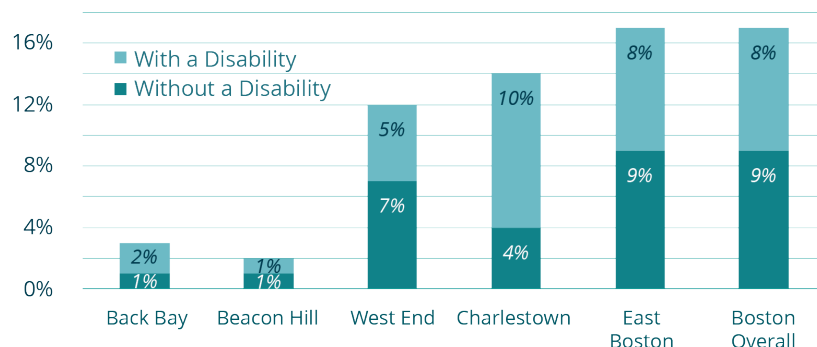


Figure 29

person households comprise 82% of all households receiving public assistance or food stamps/SNAP benefits; at the same time, the larger the household, the more likely they are to have need with over one third of 6 and 7-person households receiving SNAP. Over half of all Boston households who receive food stamps/SNAP benefits include at least one member with a disability and over 36% include children under 18 years old in the household.

⁴⁵ Mayor's Office of Food Access. "State of Food Security in the City of Boston." Boston Maps, 2019.

Existing Food Access in Charlestown

There is only one full-service grocery store in Charlestown, located at the Bunker Hill Mall. It is serviced by the 92 bus and is within walking distance of many Main Street retail services. While this grocery store accepts SNAP and WIC benefits, it is generally a more expensive grocery chain, and may not be affordable to many households. There are also four convenience stores or smaller markets which are all located around the BHA Bunker Hill Housing. Grocery items at these smaller convenience stores and markets are more limited in variety however, and are mostly pre-packaged and not as nutritious as the items found at a grocery store.

While the grocery store options in Charlestown are limited, residents of the neighborhood have reasonable grocery access compared to the average Boston resident. The average distance to a grocery store is 0.37 miles for Charlestown residents, as opposed to an average distance of 0.48 miles for the average Boston resident.⁴⁵ Several grocery stores surround the neighborhood, in Chelsea and Somerville, including more affordable options.

Although Charlestown residents have reasonable access to grocery stores, the convenience of reaching these options by different means of transportation

Figure 30. Food Access Map



Figure 30

varies. For drivers, grocery stores outside the neighborhood can be reached in under 15 minutes, but for transit users they are much less accessible, with commute times of up to 40 minutes. It is clear, both based on analysis and from resident feedback, that an additional, more affordable grocery store is needed in Charlestown. This will bring more food accessibility to lower-income residents, while also reducing the necessity of vehicle trips in and out of the neighborhood. Working with developers west of Rutherford Avenue and east of Medford Street will be key to adding a grocery store in the future.

Alternative Food Resources

Alternative food resources in Charlestown, besides brick-and-mortar stores, include an outdoor farmer's market that runs every Wednesday from May through September. During off-season, they also offer farm pickups. There is also an organic grocery delivery service called Boston Organics that operates out of Charlestown, as well as community gardens in Sullivan Square and adjacent to the Little Mystic Channel, where residents can grow fresh produce.

Food banks and pantries provide essential services for low-income and food insecure households to access a wide variety of grocery staples. Harvest on Vine is Charlestown's most active food bank. Outside of the neighborhood, there are at least 10 food banks within a 30-minute transit commute, concentrated in Somerville and Cambridge.

There is also a mobile produce market called Fresh Truck that operates every Thursday afternoon year-round at the Bunker Hill BHA. This program offers an important source of fruits and vegetables to SNAP users in Charlestown.



Figure 31

Food + Beverage (F+B) Establishments

Restaurants, cafes, fast-casual dining, bars and pubs, and take-out establishments are important drivers of economic activity, not only from residents but also from visitors coming from other places. Most F+B options in Charlestown are concentrated along Main Street and in the Navy Yard. There are almost no F+B establishments north of Sullivan Street in the neighborhood core, west of Rutherford Avenue, or east of Medford Street. A major desire of residents heard throughout the planning process is for more F+B options to be added to the neighborhood that people could walk to.

This PLAN calls for allowing ground floor retail, including F+B establishments, in all new developments in certain parts of the neighborhood, and encourages it especially around public transit hubs and along key commercial corridors. While it may be difficult to substantially add new retail spaces for restaurants, bars, and cafes within the Original Peninsula area of the neighborhood, the areas west of Rutherford Avenue and east of Medford Street present more opportunity to leverage new development to add F+B options in Charlestown.

Figure 31 (p. 46). Community garden in Charlestown. Photo by BPDA Staff.

RECOMMENDATIONS

1. Encourage developers to include retail facilities in their proposals, especially as the areas West of Rutherford Avenue change. Prioritize grocery store, pharmacies, clinics, and food and beverage establishments.
2. Facilitate a walkable retail environment with less need for cars to access essential services.
3. Encourage developers to provide needed off-site retail where needed in the neighborhood as mitigation.
4. Advocate for the inclusion of a new, affordable grocery store in the neighborhood.
5. Advocate for developments to incorporate rooftop or ground level community garden plots in new residential development to enhance fresh food access in the neighborhood.
6. Support Harvest on Vine and other local food pantries and fresh food providers' operations as needed through development mitigation.
7. Zoning changes and individual development projects should incorporate affordable commercial rents to support locating small businesses in the neighborhood.

Open Space

⁴⁶ City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2023-2029 (2023). <https://www.boston.gov/departments/parks-and-recreation/updating-seven-year-open-space-plan>

Figure 32. Acres of protected open space per 1,000 residents in Charlestown and comparison geographies. Source: City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2023-2029 (2023). <https://www.boston.gov/departments/parks-and-recreation/updating-seven-year-open-space-plan>

City of Boston Housing Related Departments:

Boston Parks and Recreation Department

Related projects include:

- Ryan Playground Improvements
- Charlestown High School Field Replacement
- Parcel Priority Plan
- Urban Forest Plan

Public Improvements Commission (PIC)

Public Works Department (PWD)

For more information, refer to Appendix A.

INTRODUCTION

Open space is as important to creating and sustaining a neighborhood as housing, transportation, and retail. It provides space for active recreation, respite, and gathering, while also cleaning air and cooling temperatures. Charlestown's open space must be maintained, protected, and planned as the neighborhood grows. As of 2023, Charlestown only has about 2.5 acres of permanently protected open space per 1,000 residents, compared to the City of Boston's 7.1 acres.⁴⁶ Planning for retention of existing and the addition of new open spaces is a critical part of neighborhood growth.

As Charlestown continues to change, and areas around Sullivan Square, west of Rutherford Avenue, and east of Medford Street redevelop, a coordinated approach to the production of new green space is needed to create a more cohesive and legible open space network for the neighborhood. Without a larger network strategy, each future development would be viewed in isolation, and result in many small, disaggregated open spaces, as opposed to the mix of large parks, greenways, and smaller spaces of respite that a neighborhood needs.

This PLAN's goals for Charlestown's open space network are to:

1. Add high quality, equitably distributed open space with a focus on currently under served areas with less park access
2. Add a mix of open space amenities, including dog parks and playgrounds
3. Add tree canopy in areas with higher vulnerability to extreme heat
4. Make new open space comfortable to reach for residents traveling on foot
5. Ensure that planned flood resilience infrastructure in Charlestown serves the dual purpose of accessible green space for active and passive recreation
6. Add needed sports fields to serve both current and future needs
7. Create a more accessible waterfront

An open space network for the future of Charlestown is included in Chapter 3 of this document based on this Chapter's Needs Analysis. It includes new sports fields, a green loop around the neighborhood connecting disparate areas, large 2+ acre parks, and dispersed smaller green spaces for a wide variety of uses.

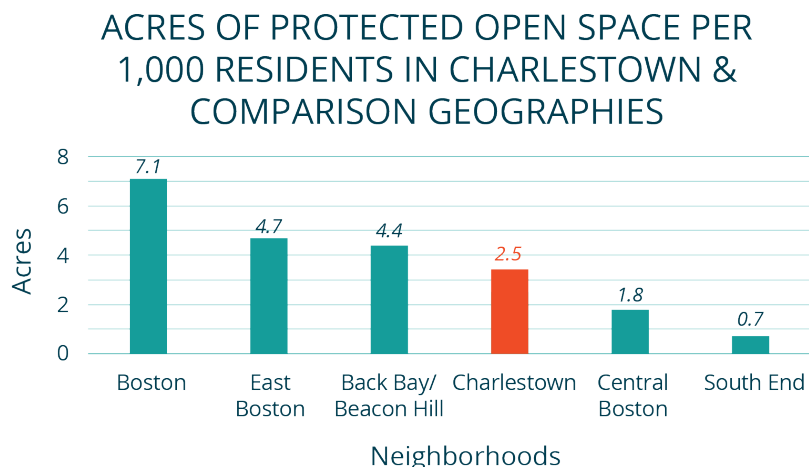


Figure 32

CHARLESTOWN'S EXISTING OPEN SPACE

Publicly owned, protected open space comprises approximately 12%, or 51 acres of the Charlestown's land area.⁴⁷ Open spaces have varying degrees of protection, ranging from permanent restrictions on development, to easements, to restrictions imposed by the owner's intentions or means.⁴⁸ The Boston Parks and Recreation Department (BPRD) measures open space in a neighborhood by looking at the spaces that are publicly accessible and permanently protected.

The 51 acres of protected open space in Charlestown includes 10 play-lots, 4 spray lots, 4 tennis courts, 2 street hockey courts, 6 basketball courts, and 4 athletic fields, as well as cemeteries, squares, and plazas. Most areas of Charlestown are served by at least 1 park. Exceptions to this include the Bunker Hill Community College area, the primarily industrial northern waterfront, and a pocket within the Original Peninsula around Pearl Street (figure 33).

Charlestown's first priority should be to maintain the ratio of open space to residents that Charlestown already has, as the population grows. To this end, BPRD has a Parcel Priority Plan established to guide the City's acquisition of land for new parks. Another option is adding open space on private property and creating protections for that open space through the development. Additionally, the quality of open space available to communities is equally or can be more important than quantity, to ensure open spaces are ones that residents want to use and contribute to the environment

What qualifies as 'Open Space'?:

This PLAN refers to open space as all publicly owned or publicly accessible parks and green spaces. There are many other kinds of spaces that are complementary to open space such as paved plazas, courtyards, and outdoor cafe seating, which are also crucial to the public realm, but are not the subject of this section.



Figure 33

⁴⁷ City of Boston, Urban Forest Plan Neighborhood Strategies (2022). https://www.boston.gov/sites/default/files/file/2022/09/2022%20Urban%20Forest%20Plan%20-%20single%20page_2.pdf

⁴⁸ City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2015-2021 (2015). p65. https://www.cityofboston.gov/images_documents/Section-7.2.4_tcm3-52994.pdf

Figure 33. Charlestown park access map. Source: City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2015-2021 (2015). p208. https://www.cityofboston.gov/images_documents/Section-7.2.4_tcm3-52994.pdf

Figure 34. Charlestown priority zones for new tree canopy map. Source: City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2023-2029 (2023). <https://www.boston.gov/departments/parks-and-recreation/updating-seven-year-open-space-plan>

Figure 35. Charlestown right-of-way opportunities for new street trees map. Source: City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2023-2029 (2023). <https://www.boston.gov/departments/parks-and-recreation/updating-seven-year-open-space-plan>



Figure 34



Figure 35

CHARLESTOWN'S URBAN FOREST

Charlestown has 11% canopy coverage, gaining 10 acres of canopy from 2014 to 2019.⁴⁹ These improvements are a positive development in the existing canopy, but this is far less than the citywide average tree canopy coverage of 27%.⁵⁰ Charlestown needs to prioritize expanding and maintaining tree canopy in the long-term, by caring for existing trees, protecting existing trees from removal to the greatest extent possible, and planting new trees.

Planting new trees is especially actionable in areas of Charleston where development is likely to occur, around Sullivan Square, west of Rutherford Avenue, and east of Medford Street. All new Article 80 developments in Charlestown should adhere to Boston Transportation Department (BTD) Complete Streets design guidelines, which include a zone along the sidewalk reserved for street furniture, utilities, and street trees.⁵¹ In addition to requiring new trees from development mitigation, residents can also request new street trees in front of their home or business on the public sidewalk if the sidewalks are at least 6 feet wide and the location meets other site requirements.⁵²

The UFP identifies several areas of Charlestown as 'priority zones' for increasing tree canopy, which are determined by overlapping indicators including Environmental Justice census blocks, low existing canopy coverage, and higher than average heat. The more overlapping indicators an area has, the higher priority it is for increasing tree canopy. In Charlestown, the highest priority areas, highlighted in the darkest shades of red in the map below, include most of Bunker Hill Housing, the Medford Street corridor, and a triangular area bounded by Medford St, Baldwin St and Rutherford Ave.

Many tree planting opportunities come from planting trees along publicly owned streets. However, much of Charlestown has very narrow streets and sidewalks, which can make it difficult to add street trees. Figure 29 identifies opportunities for planting new trees in existing ROWs, calling out the streets sidewalk widths, with a particular focus on priority areas. In Charlestown, there are an estimated 141 potential street tree planting sites (including existing tree pits with dead trees).⁵³ Existing tree pits with dead or nonexistent trees are natural candidates for replanting because the space and infrastructure is already in place to replant a new tree.

CHARLESTOWN'S HARBORWALK

Charlestown's Harborwalk serves as an important connecting path between some of the neighborhood's most well-used open spaces, including Paul Revere Park, the Naval Shipyard Park, Menino Park, and Barry Field. Charlestown's Harborwalk is a component of the Massachusetts DEP Chapter 91 Public Waterfront Act, and is critical to preserve community access to the waterfront.⁵⁴

There are some connections missing in the Harborwalk, particularly in the northern extent of the neighborhood where there are many industrial uses such as a container terminal, ship repair services and machinery companies. These uses are located in an area called a Designated Port Area (DPA), which protects water-dependent industrial uses and ensures their continued operation (figure 36). DPAs are exempt from the public access requirements of Chapter 91, and do not permit open space, which makes linking the Harborwalk difficult.

As a result of these regulations, the only public access point to the Harborwalk in the north of Charlestown is around Ryan Playground and at the Schraffts Center, where there is a shoreline boardwalk. The next access point to the south is at the Little Mystic Access Area, which leaves a missing length of the Harborwalk along most of Medford Street. Other weak links in the system are where the Harborwalk intersects at Chelsea Street and crosses under Route 1 to reach Barry Playground on the other side, and the connection from Tudor Wharf along Constitution Marina. These weak connections in Charlestown's Harborwalk

⁴⁹ City of Boston, Urban Forest Plan: Neighborhood Strategies, September 2022 § (2022). https://www.boston.gov/sites/default/files/file/2022/09/Charlestown_NeighStrats2022.pdf

⁵⁰ City of Boston, and City of Boston, Urban Forest Plan Neighborhood Strategies - Charlestown § (2022).

⁵¹ City of Boston and Boston Transportation Department, Boston Complete Street Design Guidelines 2013 § (2013): p23.

⁵² Boston Parks and Recreation Department. "How to Get a Tree Planted on City Land." Boston.gov, Updated: March 15, 2022. <https://www.boston.gov/departments/parks-and-recreation/how-get-tree-planted-city-land>.

⁵³ City of Boston, and City of Boston, Urban Forest Plan Neighborhood Strategies - Charlestown § (2022).

⁵⁴ Massachusetts Office of Coastal Zone Management. "Chapter 91, the Massachusetts Public Waterfront Act." Mass.gov. Accessed July 19, 2023. <https://www.mass.gov/guides/chapter-91-the-massachusetts-public-waterfront-act>.



Figure 36

SURVEY QUESTION: WHAT SPORTS FIELDS DO YOU TRAVEL OUTSIDE OF CHARLESTOWN TO USE AT LEAST ONCE A MONTH?

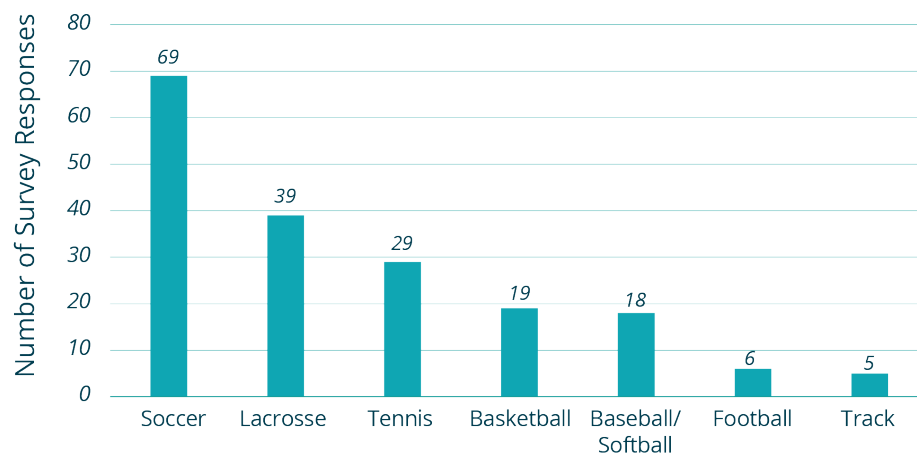


Figure 37

should be addressed with a plan for way-finding and signage to ensure that there is a more continuous path of travel around Charlestown's waterfront, especially where the Designated Port Area restricts pedestrian access to the water.

SPORTS FIELDS AND COURTS: EXISTING AND FUTURE NEEDS

Sports fields and multi-use recreational fields were identified as necessary additions in Charlestown through consistent feedback from residents, especially to serve the youth population.

Existing facilities

Currently, Charlestown has the following city-owned sports facilities as seen in Figure 38. Additionally, the Bunker Hill Community College (BHCC) fields, which include 1 baseball diamond, are also important community resources for active recreation, although they are owned by the college. Historically, they have not been open for use by Charlestown residents, but as of 2023, BHCC had agreed to let Charlestown's youth soccer league use the fields. In the future, as the BHCC campus changes, maintaining public sports amenities here will be a priority.

Existing and Projected Need for Sport Fields and Courts

Determining how many sport fields and courts Charlestown needs is not straightforward. Various non-profits, cities, and planning agencies have attempted to quantify the acreage of athletic amenities or number of sports facilities needed based on population, but numbers vary widely by the time period the recommendations were made and the geographies they focused on.

On the lower end of the spectrum, in 2010 the non-profit New Yorkers for Parks (NY4P) released an open space index which recommended 1.5 athletic fields per 10,000 residents.⁵⁵ By this standard, Charlestown would need about 3 athletic fields, which is one less than the 4 the neighborhood currently has. On the other end of the spectrum, in 2020 the English non-profit Fields in Trust (FiT) recommended 1.2 hectares, or about 3 acres, of 'playing pitches' per 1,000 residents.⁵⁶ Charlestown has about 12 acres of sports fields today, 23 acres less than the 35 acres the FiT standard recommends for English towns. There is no perfect equation to determining how many athletic fields or sports courts a place needs. Instead, understanding a place's culture and community informs need.

Based on resident feedback, Charlestown's sports facilities are well used today, especially the multi-use fields which serve lacrosse, youth soccer, and adult soccer. A PLAN: Charlestown survey asked residents what kinds of sports fields and courts have high enough demand that they can be hard to access, and the number one response was soccer fields, followed by lacrosse, both of which utilize multi-use fields, of which Charlestown only has 3 (figure 38).

⁵⁵ New Yorkers for Parks. "Open Space Index for Jackson Heights." ny4p.org. Accessed July 19, 2023. https://www.ny4p.org/client-uploads/pdf/OSI/NY4P_Jackson_Heights_Open_Space_Index.pdf.

⁵⁶ Fields in Trust. "Guidance for Outdoor Sport and Play - Beyond the Six Acre Standard, England." Fields in Trust, 2020. <https://www.fieldsintrust.org/Upload/file/Guidance/Guidance-for-Outdoor-Sport-and-Play-England.pdf>.

Figure 36 (p.52). Charlestown Harborwalk and Designated Port Area (DPA) map.

Figure 37 (p.52). PLAN: Charlestown open space survey response. "What sports fields do you travel outside of Charlestown to use at least once a month?" (2022). 185 total survey respondents.

Figure 38. Inventory of city-owned sports facilities in Charlestown

Amenity / Park	Baseball Diamond	Multi-Use Field	Track + Field	Basketball Court	Tennis Court	Ice Rink
Barry Field	1	1				
Ryan Playground	6					
Charlestown High School Field	1	2	1		3	
Doherty Playground				2		
Edwards Playground				1		
Peter Looney Park				1		
O'Neill Memorial Rink						1
TOTAL	8	3	1	4	3	1

Figure 38

⁵⁷ Boston Redevelopment Authority, Cooperation Agreement for the Bunker Hill Housing Redevelopment in the Charlestown Neighborhood of Boston, Massachusetts § (2022). <https://bpdapp.box.com/s/9x12j3fredk5rg8zj5kmzvmgce3f8hfb>

⁵⁸ Boston Planning & Development Agency, Hood Park PDA Memorandum (2019). <https://www.bostonplans.org/getattachment/279e2ca0-0063-463a-aace-f8ba81b03a48>

⁵⁹ City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2015-2021 (2015). p197. https://www.cityofboston.gov/images_documents/Section-7.2.4_tcm3-52994.pdf

⁶⁰ City of Boston Parks and Recreation Department, Open Space and Recreation Plan 2015-2021 (2015). p198. https://www.cityofboston.gov/images_documents/Section-7.2.4_tcm3-52994.pdf

Figure 39 (p.55). Youth sports enrollment in Charlestown over time. Source: Sports leagues in Charlestown independently contributed their enrollment totals.

Data from various youth sports leagues in Charlestown, including little league, girls softball, and lacrosse, show that all have enrollment trending upwards, but none as quickly as soccer. Between 2018 and 2021, Charlestown's population increased by about 5%, while the number of children enrolled in the spring youth soccer increased by 55% (figure 39). As of 2021, 575 kids were enrolled in the Charlestown Youth Soccer Association (CYSA)'s spring K-12 league, which is about 27% of Charlestown's age 5-17 population. Youth soccer is an integral and growing part of Charlestown's community, and as Charlestown's population increases, demand for multi-use athletic fields will continue to grow.

Charlestown's youth soccer is the largest and fastest growing of the neighborhood's youth sports, and there are other sport leagues that can use the same fields, just as adult recreation soccer and lacrosse. Today, CYSA uses Barry Field, the Charlestown High School fields, and recently the Bunker Hill Community College field. Due to limited availability, the fields are each divided into 4 to 6 smaller areas during practice, so various age groups and teams can practice at the same time. CYSA reports that these areas are too small for scrimmages, limit the kinds of practices that can be held, and that practice lengths are controlled to make sure several practices can happen sequentially in an evening.

THE DEVELOPMENT PIPELINE

There are several projects planned in Charlestown which will improve the neighborhood's open space network and add tree canopy on a mix of privately and publicly owned land. This PLAN supports and considers these expected improvements to be the baseline upon which the larger PLAN builds:

- The Bunker Hill Housing Redevelopment proposes approximately 7 acres of open space, of which 2.7 acres is intended to be publicly accessible.⁵⁷ The project includes fields and courts for active recreation, dog areas, and tot lots.
- Hood Park, west of Rutherford Avenue, promises to deliver 2.88 acres of publicly accessible open space upon completion.⁵⁸
- The Rutherford Avenue/Sullivan Square redesign (a Boston Transportation Department project), proposes a new boulevard condition for the street and a green corridor along the east side of Rutherford Avenue that would provide a multi-use path, tree plantings, and landscaping.⁵⁹
- New playgrounds at the Edwards School (new equipment, lighting, furniture, plantings, and improved basketball and street hockey courts).
- Medford Street has a planned green bicycle/pedestrian corridor. This complements the Rutherford Avenue bicycle/pedestrian corridor, connection to the Sullivan Square area and the Harborwalk at the Little Mystic Channel.⁶⁰

At the time of this PLAN's writing, there are two ongoing projects impacting sports fields in Charlestown. The first is the Charlestown High School Track and Field Replacement project, which intends to replace the turf for a new football field/multi-purpose field, replace the track, and add new water filling stations. This project does not add any additional sport facilities, but improves the quality of those that exist. The second project is the Ryan Playground Improvements project intends to renovate the entire park, adding a new multi-use sports field, as well as a resilient edge along the Mystic River to block a major flood pathway to the neighborhood.

The Ryan Playground Improvements Project is ongoing, with design informed by three community meetings and a survey to identify what amenities should be included in the project. The park already has 6 baseball diamonds today, but surveys helped identify the need for a new multi-use field to help serve demand for soccer and lacrosse fields (figure 39). The new design maintains the 6 baseball diamonds, while adding a multi-use field across two of them, which will bring the total count of multi-use fields in the neighborhood up from 3 to 4.

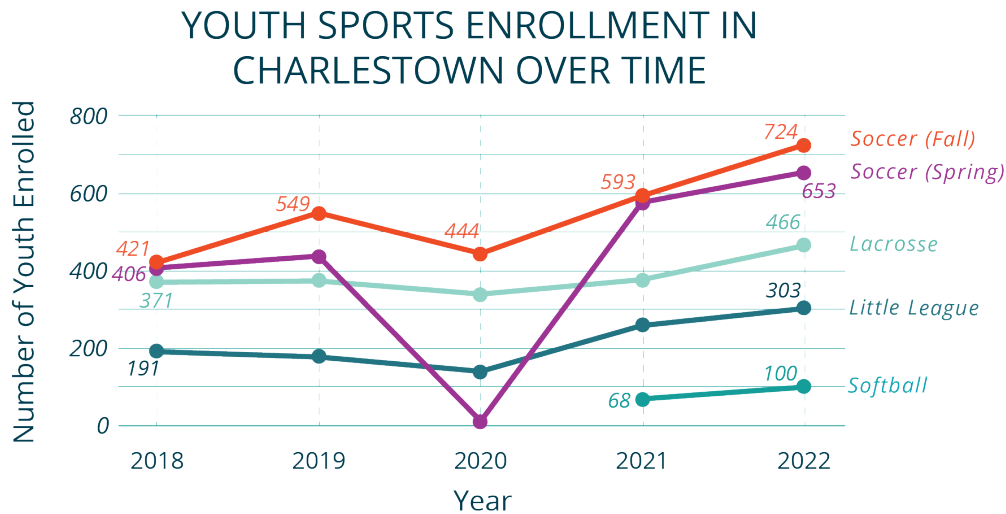


Figure 39

RECOMMENDATIONS

1. Increase the acres of open space in Charlestown as population increases.
2. As Charlestown continues to grow attention should be paid to providing high quality, equitably distributed open space with a focus on currently underserved areas with less park access, higher vulnerability to extreme heat, and less tree canopy.
3. Add street trees in Charlestown, focusing on the highest priority areas through the Urban Forest Plan, as well as filling existing tree pits which are currently empty.
4. The PLAN recommends 2 new, publicly accessible soccer/lacrosse fields as part of any future work at the BHCC to replace the existing sports fields there today.
5. Private developments should include measures to permanently protect the open spaces they create through easements, deed restrictions, land transfers to the Parks Dept. or other means.
6. Coordinate with the Coastal Resiliency Delivery Team of the BPDA to ensure that planned flood resilience infrastructure in Charlestown serves the dual purpose of accessible green space for active and passive recreation.
7. Use signage and landscaping to draw users to Harborwalk point access especially in the vicinity of Designated Port areas and develop an interpretive signage system to explain the maritime industrial and related uses. Fill the missing links in the Harbor walk.

Climate Resilience

INTRODUCTION

Charlestown is exposed to climate change impacts including increased precipitation, stormwater flooding, sea level rise, coastal & riverine flooding, and extreme temperatures. Addressing the impacts of climate change by building a resilient Charlestown is critical to protect natural resources and improve the health and wellbeing of residents. This section will cover previous planning work addressing the above topics, as well as information on the implementation of the plans' recommendations.

Charlestown benefits from having multiple recently completed climate resilience plans which cover the neighborhood, organized in this section by resilience topic area. Climate Ready Boston, the City of Boston initiative dedicated to preparing for the impacts of climate change, has produced several recent plans relevant to Charlestown, including Climate Resilience Solutions for Charlestown Phases I & II, and Heat Resilience Solutions for Boston. Additional planning relevant to resilience by other City departments also includes: the BPDA's Coastal Flood Resilience Design Guidelines, the Public Works Department's Climate Resilience Infrastructure Guidelines, and the Boston Parks and Recreation Department's Urban Forest Plan.

City of Boston Climate Resilience Related Departments:

Climate Ready Boston

Policies and programs include:

- Resilience planning
- Cool Roofs Pilot
- Healthy Places Initiative

For more information, refer to Appendix A.

THE DEVELOPMENT PIPELINE

Climate Ready Charlestown Phase I included strategies to cut off this major flood pathway by redesigning Ryan Playground and integrating coastal resilience solutions along the Schrafft's Center waterfront, which are now being implemented.

Figure 40. City of Boston, Climate Resilience Solutions for East Boston and Charlestown Phase I. Existing flood pathway at Ryan Playground and Schrafft's Center Waterfront.

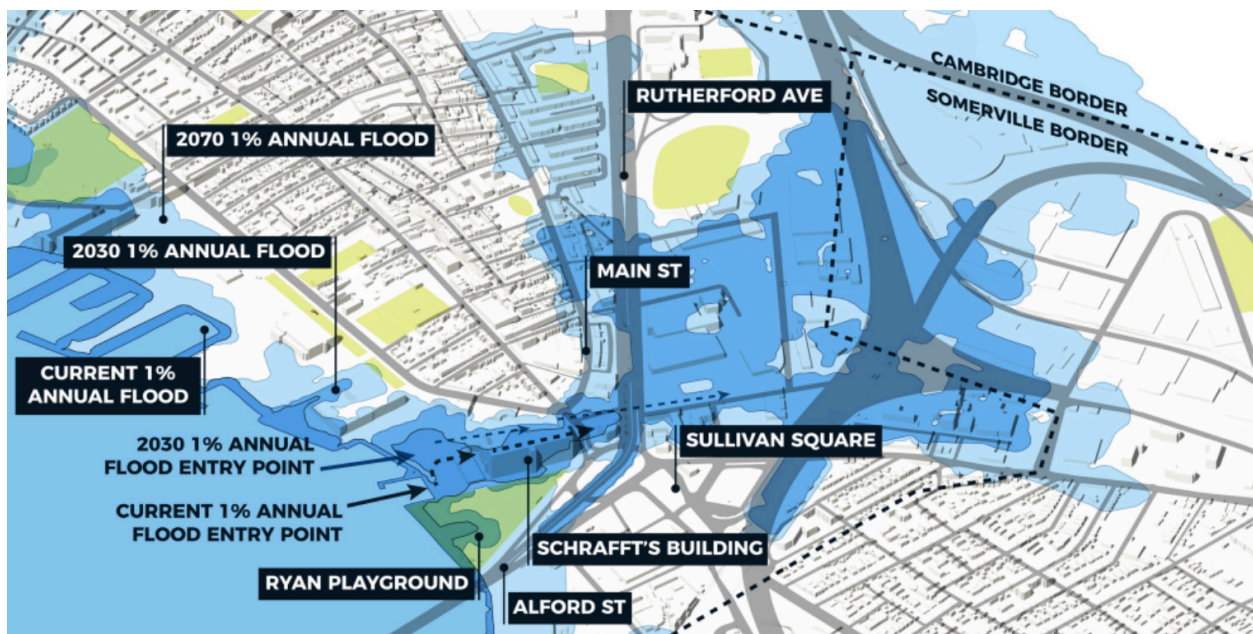


Figure 40

- Ryan Playground Improvements

Led by the Department of Parks and Recreation (BPRD), Ryan Playground redesign began fall of 2020. The design process included three community meetings from 2021 to 2022. The new design will provide flood protection in the form of a large wall built landward of the existing seawall, hidden from park view below a berm. Since elevating sports fields is costly, the flood barrier will be limited to the coastal portion of the park. The berm will create the setting for a new playground with a vantage point overlooking the Mystic River and provides the backdrop for viewing the many sports fields in the heart of the park.

- Schrafft's Center Waterfront

Building a resilient waterfront through a new system of elevated parks and pathways is critical along the Schrafft's Center waterfront, which is on privately-owned land and must be coordinated with private redevelopment. In addition to flood protection, this project would provide new open space and waterfront access for the Charlestown community. At the time of PLAN: Charlestown, the Schrafft's Center (425 Medford Street) redevelopment proposal includes these resilience and open space features.

Figure 41. City of Boston, Climate Resilience Solutions for East Boston and Charlestown Phase I. Proposed resilience improvements to Ryan Playground and Schrafft's Center Waterfront.

SEA LEVEL RISE AND COASTAL FLOODING

Climate Resilience Solutions Phase I (2017)

Climate Resilience Solutions for East Boston and Charlestown Phase I studied the Charlestown waterfront from Sullivan Square, the Neck and Rutherford Avenue. From the Phase I report, the Sullivan Square waterfront was identified as the most near-term and extensive flood entry point in Charlestown. In the current 1% annual chance flood, water would first cross the waterfronts at Schrafft's City Center (529 Main Street and 465 Medford Street) and Ryan Playground. Coastal flood waters would fill the Schrafft's Center building parking lot and then flow onto Main Street through the Schrafft's Center driveway and Massport's dormant rail corridor, with flooding remaining localized around Main Street and Mishawum Street.

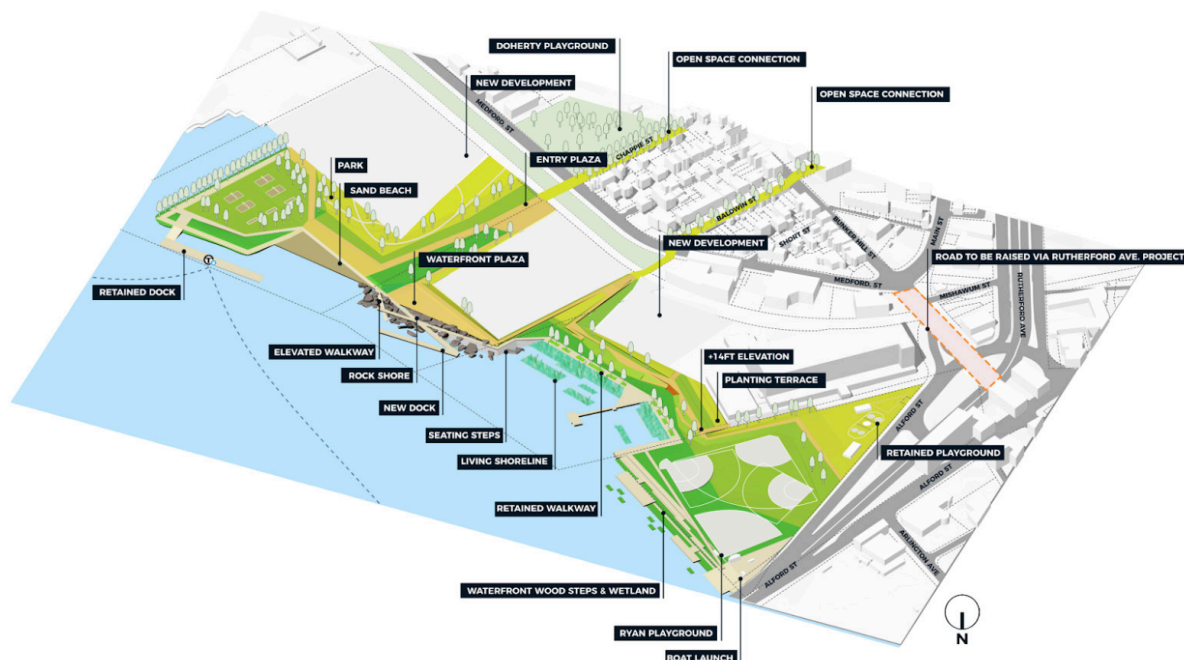


Figure 41

Climate Resilience Solutions Phase II (2012)

This plan includes strategies to protect the Charlestown Navy Yard and the Little Mystic Channel waterfront from coastal flooding resulting from sea level rise and storm surge. An important note from Phase II is that a part of this area, namely the Boston Autoport, falls within a Designated Port Area (DPA) and is governed by Massachusetts state entities and regulations, complicating recommendation implementation because the intent of DPAs is to preserve water-dependent industrial uses. The work that came out of Climate Ready Charlestown Phase II takes this regulatory framework into account by designing near-term solutions that are currently allowed and studying longer-term solutions that may be permissible in the future. The key recommendations and implementation progress are organized by focus area:

- Boston National Historical Park and Constitution Wharf

This focus area extends along the southwestern portion of the Navy Yard and waterfront from the National Park Service's (NPS) Boston National Historical Park to the Department of Conservation & Recreation (DCR)-owned and operated Paul Revere Park and the new Charles River Dam. Resilience solutions here include options for flood walls combined with walkways and a raised Harborwalk. The strategy for the National Historical Park is being developed iteratively with NPS, who are undertaking their own resilience planning for their site and coordinating with the City of Boston, BPDA, and other adjacent landowners.

- Charlestown Navy Yard

This focus area extends along the waterfront from the Chelsea Street bridge at the northeastern edge of the Navy Yard to 5th Street and the southwestern edge of the Navy Yard. The preferred resilience solution here includes elevating the Harborwalk, or alternatively raising 1st Avenue in conjunction with building-level adaptation along the waterfront.

- Little Mystic Channel

This focus area extends along the Little Mystic Channel waterfront from Barry Field and the Tobin Memorial Bridge, past the BCYF Charlestown Community Center and Little Mystic Boat Ramp, to high ground on the Lower Mystic Greenway. Resilience solutions here include the options for a redesigned coastline and raised Harborwalk with improved public spaces to protect Charles Newtown and neighborhood amenities.

- Terminal Street and the Boston Autoport

This focus area includes the waterfront along Terminal Street and the Autoport. Resilience solutions here focus on building- and site-level adaptations for water-dependent industrial uses. Options for perimeter protection at the Autoport are also suggested but will require further coordination between the City, MassPort, and Autoport businesses and tenants.

Other City Work

The BPDA intends to conduct a vulnerability assessment of BPDA property in the Navy Yard. Similar to other assessments the BPDA has undertaken at Long Wharf and the Raymond L. Flynn Marine Park, the scope would include furthering flood risk assessment and management, advancing the design of potential flood mitigation measures, developing conceptual engineering designs, identifying probable construction costs, and permitting processes, and identifying funding sources for further design and construction in a future contract.



Figure 42. Stormwater near term flooding map. Source: City of Boston Environment Department. Climate Ready Boston Map Explorer, April 22, 2022. <https://www.boston.gov/departments/environment/climate-ready-boston-map-explorer>.

Figure 42

INCREASED PRECIPITATION AND STORMWATER FLOODING

Managing increased stormwater flooding is key to climate resilience. The worst stormwater flooding is likely to occur in low-lying, poorly draining areas during major rain events, such as the land along I-90, the Rutherford Avenue underpasses, sections of Main Street, and portions of the BHA Bunker Hill Housing. The area along I-90 and at BHA will be addressed overtime as development occurs, while flooding at the Rutherford Avenue underpasses is a consideration of the ongoing Rutherford Ave and Sullivan Square Redesign project.

Coastal Flood Resilience Design Guidelines (2019)

The BPDA's Coastal Flood Resilience Design Guidelines provide best practices for flood resistant design and are intended to be administered by BPDA staff for the review of projects within the Coastal Flood Resilience Zoning Overlay District, which includes all of the flooding susceptible areas identified in Figure 42. The guidelines consider both new construction and building retrofits.

Climate Resilient Infrastructure Guidelines (2018)

The Public Works Department's (PWD) Climate Resilient Design Standards & Guidelines address flooding due to sea level rise and storm surge to protect the public right-of-way, such as along Main Street and Rutherford Avenue. The guidelines are intended to provide climate design adjustments and a standardized climate resilient design process for flood barriers, augmenting existing City and State design standards.

Other City Work

In 2022, Mayor Wu appointed the City's first Director of Green Infrastructure, to coordinate across city departments and agencies, and help tackle the related problems of flooding and urban heat. Green infrastructure can help to manage and mitigate the effects of stormwater flooding through solutions such as permeable pavement, bioswales, and tree plantings, while reducing heat, improving air and water quality, and enhancing the public realm.

EXTREME TEMPERATURES

Heat resilience means preparing people, buildings, infrastructure, and the public realm to withstand extreme heat events. For Charlestown, this means ensuring that all residents and other stakeholders have the resources they need to stay cool and safe in hot summer months. To build resilience to heat, Boston must address three factors of heat risk: exposure to extreme heat, access to cooling, and the sensitivity to changes in temperature due to underlying factors like health or age that may influence vulnerability to heat.⁶¹

In Boston, extreme heat is a growing concern with more hot days, longer heat waves, and higher summer temperatures due to climate change. In 2022, the City released a plan to reduce the impacts of extreme heat that includes strategies to reduce localized temperatures and increase access to cooling resources. Charlestown is one of many neighborhoods that experiences higher heat event hours (figure 43). Charlestown also benefits from coastal breezes that can cool the neighborhood due to the close proximity to the water. Two other key elements for reducing heat are tree canopy and green open space, both of which the City's Parks Department has undertaken recent planning to address.

Heat Resilience Solutions for Boston (2022)

Produced through Climate Ready Boston, this plan provides a citywide framework to prepare Boston for hotter summers, with particular focus on Boston's environmental justice neighborhoods, as well as citywide strategies. Recommendations of the plan pertain to providing relief during heat waves through operations changes, city services, and social changes, as well as recommendations for building cooler communities through better materials, building retrofits including adding reflective white roofs, and enhanced open space and tree canopy.

Urban Forest Plan (2022)

Trees and outdoor green spaces are among the most effective nature-based heat mitigation strategies. Trees reduce temperatures by providing shade and through ambient cooling radiated from their leaves, with urban climate modeling showing that planting trees in clusters can increase the cooling benefits.⁶² Towards an enhanced ecosystem and tree canopy, which has many benefits in addition to reducing heat, the Boston Parks Department released the Urban Forest Plan in 2022, which is essentially a 'manual for how the Boston community can work together to prioritize, preserve, and grow our tree canopy.'⁶³

2023-2029 Open Space and Recreation Plan

Green spaces, tot sprays, pools, and waterfronts provide outdoor places to find relief on hot days. However, while green space with trees is one of the most effective ways to increase neighborhood thermal comfort, available space for tree plantings and new parks can be limited, especially older, more tightly packed neighborhoods like Charlestown. To plan for this, the 2023-2029 Open Space and Recreation Plan, provides 'an overview of what's going on in Boston's park system right now and then proposes actions for the next seven years', including the prioritization of parcels of land to acquire and protect for public use, across the city.⁶⁴

⁶¹ City of Boston, Heat Resilience Solutions for Boston § (2022). p.14.

⁶² City of Boston, Heat Resilience Solutions for Boston § (2022). p.235.

⁶³ City of Boston. "Urban Forest Plan." Boston.gov, Updated: March 14, 2023. <https://www.boston.gov/departments/parks-and-recreation/urban-forest-plan>.

⁶⁴ Parks and Recreation. "Open Space and Recreation Plan." Boston.gov, Updated: July 13, 2023. <https://www.boston.gov/departments/parks-and-recreation/creating-seven-year-open-space-plan>.

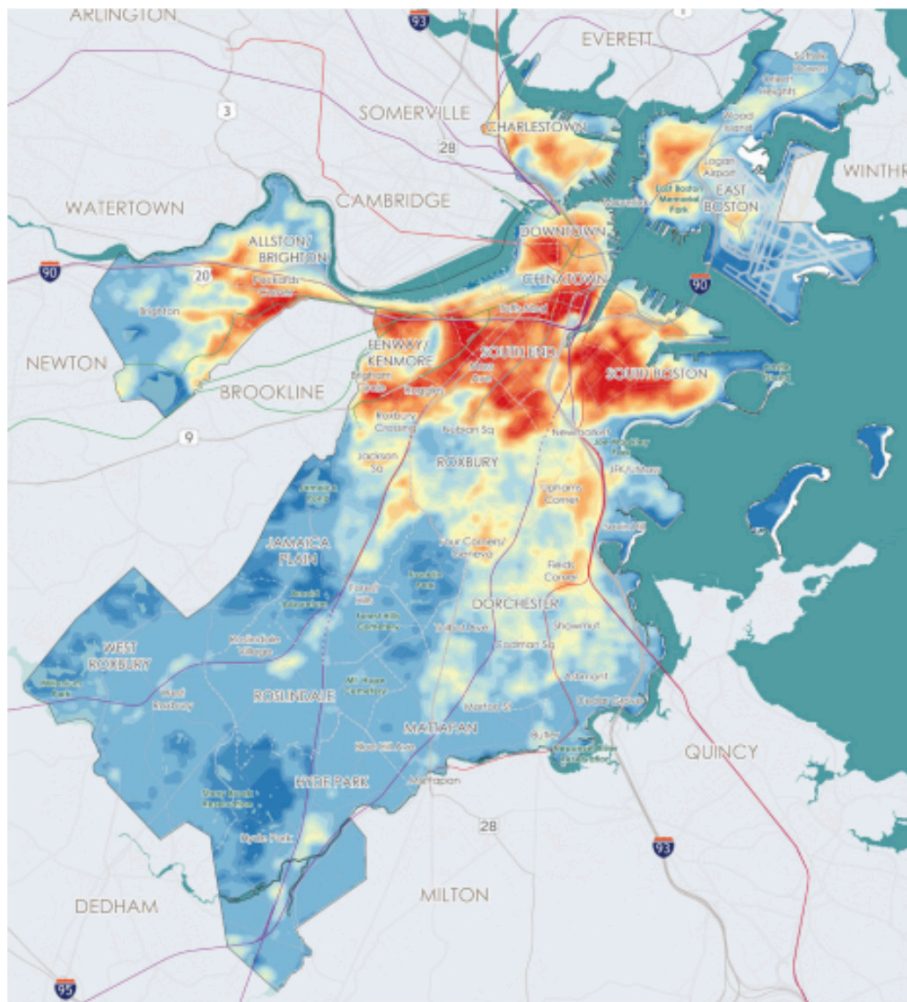


Figure 37 . Boston heat event hours map. Source: City of Boston, Heat Resilience Solutions for Boston 5 (2022).

HEAT EVENT HOURS: Less than 25 hrs  More than 37 hrs

Figure 43

RECOMMENDATIONS

PLAN: Charlestown's key recommendations for resilience are captured in the Open Space section and the Urban Design guidelines sections of this PLAN, pertaining to increasing tree canopy and green infrastructure, while using more sustainable materials with less heat impact. Beyond this, PLAN: Charlestown endorses the previous planning work by Climate Ready Boston, recommending the following:

1. Continue the implementation of Climate Ready Boston projects and Green Infrastructure features throughout the neighborhood.
2. Continue coordination with State, Federal, and private partners on the implementation of climate adaptation and mitigation measures that serve the public good. The National Park Service and the MBTA are examples of key partners.



Figure 44



Figure 45



Figure 46

Preservation

INTRODUCTION

Figure 44 (p.62). 249-259 Bunker Hill Street in Charlestown. Photo by BPDA Staff.

Figure 45 (p.62). 52 Sullivan Street in Charlestown. Photo by BPDA Staff.

Figure 46 (p.62). 35-37 Baldwin Street in Charlestown. Photo by BPDA Staff.

Figure 47. 1890 Statewide Topographic Map, showing Charlestown. Outline and annotations by BPDA. Source: Mapjunction. Mapjunction. Accessed August 24, 2023. <https://mapjunction.com/>.

The preservation of historic Charlestown is a community concern. The community's residential fabric tells a complex history of change over time - changes in architectural styles, family structures, industries, and the socioeconomic status of residents. The layering of these factors created the beloved built form seen today in Charlestown's Original Peninsula. In this area, free-standing brick Federal-style homes neighbor Greek Revival row houses, and only blocks away are three-story wood-clapboard Second Empire structures with mansard roofs (figures 44, 45, 46). Roads are narrow, feel walkable, and no two homes are exactly the same.

This plan builds off the research of dedicated historians and preservation advocates, such as Ed Gordon who completed inventory surveys in 1987 and 1990, to present proactive approaches to protect Charlestown's historic fabric. This section of the Needs Analysis catalogs the kinds of preservation designations and protective policies the historic parts of Charlestown have today, identifies where they may fall short, and recommends several measures to further preserve this area of the neighborhood in the future. Historic designations exist at the local, state, and federal levels, each with its own processes for designation and set of benefits. In general, the process of achieving designation begins at the local level by identifying historic resources through an inventory or survey, before rising to the state then national level.

To date, archaeologists have inventoried 37 archaeological sites in Charlestown that record thousands of years of history including the ancient Massachusetts village of Mishawum, the 1629 John Winthrop Great House, the Battle of Bunker Hill, and others. Many of these sites remain intact within the neighborhood and there are likely many others as yet discovered.



Figure 47

The Charlestown Navy Yard is covered in the Navy Yard specific chapter of this plan, as the preservation tools at work there are very different from those of the rest of the neighborhood. In the historically industrial parts of the neighborhood, west of Rutherford Avenue, south of Cambridge Street, and east of Medford Street, this section primarily applies to older surviving industrial buildings with historic significance.

EXISTING PRESERVATION DESIGNATIONS + PROTECTIONS

Inventory

The first step of any landmark or historic designations at the local, state, and federal levels is typically a cultural resources survey, or inventory, of historic assets in a community. Massachusetts has inventory forms for “buildings, structures, objects, bridges, areas, parks and landscape features, burial grounds, streetscapes, historic archaeological sites, and Ancient Native archaeological sites”.⁶⁵ Typically, inventories are completed community wide by local historical commissions. In Charlestown’s case, the Office of Historic Preservation (OHP) is responsible for recording basic information about the historic, architectural, and archaeological significance of both properties and districts within Boston’s neighborhoods. Completed inventories provide an evaluation of the significance of resources, allowing preservation decisions to be made contextually and identify properties eligible for listing in the National Register of Historic Places.

Charlestown has many inventoried properties and areas (figure 48), from surveying work completed during the late 1970s through the early 1980s. Updates have been sporadic since, and many properties were never surveyed or have incomplete inventory forms. Inventory forms are typically completed by local historical commissions or by professional historic survey consultants working for local historical commissions, but can also be completed by historic preservation organizations, local historical societies, property owners, and other individuals and groups.⁶⁶ The Massachusetts Historical Commission (MHC)’s *Historic Properties Survey Manual* provides instructions for completing inventory forms, and the MHC provides blank inventory forms.⁶⁷ The most recent completed inventory updates performed in Boston were in the North End and Roxbury, which were completed in stages over many years, providing a model for how an updated inventory for Charlestown might be done.

Inventory forms are the foundation of municipal historic preservation efforts, as they support the establishment of specific historic preservation tools, such as local historic districts and demolition review measures, and aid in their administration. It is a recommendation of this plan that an updated inventory be conducted for the entire Charlestown neighborhood. However, inventory forms alone do not establish historical designation or protect properties from demolition or alteration.

Office of Historic Preservation (OHP)

Historic preservation interfaces with a wide range of other disciplines, services, and community goals across its scope and breadth. The Office of Historic Preservation (OHP) aims to identify, safeguard, and celebrate historic places, people, and events through the city’s historic landmarks, districts, structures, sites, landscapes, objects, archaeological resources, and intangible cultural values. The OHP also seeks to raise awareness about the environmental, social, and economic benefits of Boston’s historic resources and identifies opportunities to tell the full story of Boston through its cultural resources.

The OHP is part of the Environment, Energy and Open Space Cabinet and consists of the Boston Landmarks Commission, the Archaeology Program and the Commemoration Commission.

The OHP’s landmarking of properties and districts at the local level comes with

⁶⁵ Secretary of the Commonwealth, and Massachusetts Historical Commission, KnowHow #6: Information and Assistance from the Massachusetts Historical Commission - Historic Properties Inventory Forms § (n.d.). <https://www.sec.state.ma.us/mhc/mhcpdf/knowhow6.pdf>

⁶⁶ Ibid.

⁶⁷ Secretary of the Commonwealth, and Massachusetts Historical Commission, Historic Properties Survey Manual - Guidelines for the Identification of Historic and Archaeological Resources in Massachusetts § (1995). https://historicharvard.files.wordpress.com/2015/07/survey_manual_1995.pdf

many protections and preservation safeguards which vary depending by type of designation. Based on the resource's scale and level of significance, the Commission determines if one of four designations should be applied:

- **An Individual Landmark:** An individual property, improvement or physical feature with significance above the local level.
- **A Landmark District:** An area with significance above the local level (State, Regional, or National).
- **An Architectural Conservation District:** An area with significance at the local level.
- **A Protection Area:** An area adjacent to and contributing to the physical environment of an Individual Landmark, Landmark District, or Architectural Conservation District.⁶⁸

Properties which are landmarked or are located within landmarked districts have protections from physical changes that might compromise its integrity, including demolition and alterations. Exterior, and even some interior, changes to these properties are reviewed and approved by the Commission through a design review process. Occupancy and use are not subject to review. State and federal designations only provide resources for preservation. In contrast, a local commission can enforce protection measures for a historically designated building or area, highlighting the importance of seeking designation.⁶⁹

⁶⁸ City of Boston. "Designating Landmarks in Boston." Boston.gov, Updated: January 24, 2023. <https://www.boston.gov/departments/landmarks-commission/designating-landmarks-boston>.

⁶⁹ Secretary of the Commonwealth, and Massachusetts Historical Commission, There's a Difference! § (n.d.) <https://www.sec.state.ma.us/mhc/mhcpdf/difference.pdf>

Figure 48. Map of inventoried properties and local landmark designations in Charlestown. Source: Massachusetts Historical Commission. "MACRIS Maps." Maps.mhc, Data Updated: June 26, 2023. <https://maps.mhc-macris.net/>.

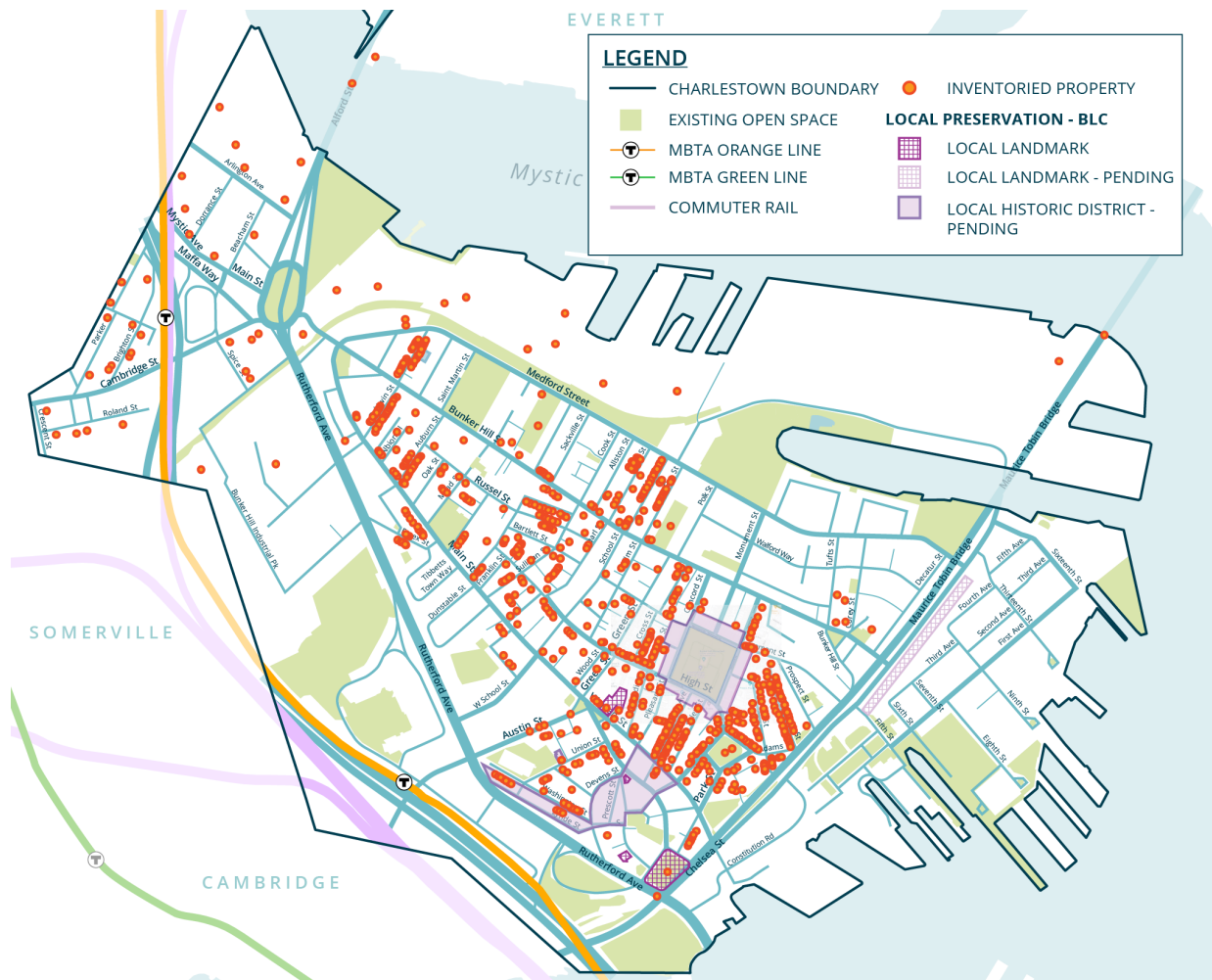


Figure 48

The OHP process of designating a property or district begins with a petition submitted to the OHP by Boston residents, and signed by ten registered Boston voters.⁷⁰ A OHP Commissioner or the Mayor can also submit a petition, but with broad community support for a new landmark. The OHP will then hold a public hearing to vote on whether to accept the petition based on the merit of the application. If it is accepted, the petition is added to the pending Landmarks list, and a Study Report is prepared.⁷¹

Historic Districts

At the time of writing this plan, the OHP has hired a consultant to prepare a Study Report for the Monument Square Landmark District in Charlestown, for which the OHP received a petition in April of 2022 from the Charlestown Preservation Society. The petition was accepted by the OHP, and is now a pending Landmark District until the Study Report is complete. An expansion of the National Register District has been deemed eligible but has not yet been formally listed. The final step is for the OHP to post a draft for public feedback, followed by a Commission vote on designation, then a vote by the Mayor and City Council.

Throughout the PLAN: Charlestown process, it has been clear that many members of the community are interested in stronger protections, and therefore local landmarks designations, for additional historic properties and districts within Charlestown. A number of additional local historic districts are pending. As of the release of this plan, the creation of a Charlestown Industrial Architectural Conservation District is under review by the Boston Landmarks Commission. Architectural Conservation Districts typically emphasize the physical features within a given area and preserve the fundamental character of the district in terms of forms, materials, and details of building. In addition, a National Register expansion to the Town Hill District is pending. Doherty Park and Phipps Cemetery have recently been identified on the National Register.

Petitions are welcome for any proposed landmarks community members believe are worth preserving. It encourages interested parties to learn more about the process by contacting the OHP.⁷²

Local Designation

As of the writing of this PLAN, Charlestown has four local landmarks (Penny Savings Bank, Edward Everett House, Austin Block, and Great House at City Square), one pending landmark (Ropewalk), and three pending local historic districts (Monument Square, Union Square and Town Hill). Figure 48 maps these landmarks as well as all of the inventoried properties in Charlestown.

⁷⁰ City of Boston Landmarks Commission, Landmark Petition Form § (2022). https://www.boston.gov/sites/default/files/file/2022/06/PETITION%20REVISED%20June%202022_1.pdf

⁷¹ City of Boston Landmarks Commission. "Landmark Study Reports." Boston.gov, July 13, 2023. <https://www.boston.gov/departments/landmarks-commission/landmark-study-reports>

⁷² City of Boston Landmarks Commission. "Designating Landmarks in Boston." Boston.gov, Updated: January 24, 2023. <https://www.boston.gov/departments/landmarks-commission/designating-landmarks-boston>

Figure 49. Photo of Penny Savings Bank, Charlestown. Local Landmark Designation.

Figure 50. Photo of John Winthrop Great House, Charlestown. Source: Wikimedia Commons. John Winthrop Great House Charlestown Massachusetts. May 2008. Photograph.



Figure 49



Figure 50

State Designation

The Massachusetts Historical Commission (MHC) maintains the State Register of Historic Places, which is “a comprehensive listing of the buildings, structures, objects, and sites that have received local, state, or national designations based on their historical or archaeological significance”.⁷³ This inventory is used by federal, state, and local agencies determining historic designation status.

Many historic resources have multiple designations, such as the Bunker Hill Monument, which is both a National Historic Landmark as well as a Massachusetts Landmark, is individually listed on the National Register of Historic Places, and is a contributing resource to the Monument Square National Register district (figure 51). It is worth noting that the MHC typically does not designate Massachusetts Landmarks without their first being designated at the local or national level.

Federal Designation

The National Register of Historic Places is the United States’ official list of historic places worthy of preservation. Places on the list take the form of both districts and individual structures or landmarks. Charlestown has several places which are on this list, including Monument Square, the Charlestown Navy Yard, City Square, and Doherty Park, among others. The National Park Service (NPS) maintains the National Register of Historic Places list as “part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archaeological resources”.⁷⁴

⁷³ Galvin, William Francis. “State Register of Historic Places.” Sec. state.ma.us. Accessed July 17, 2023. <https://www.sec.state.ma.us/mhc/mhcstreg/streg.htm>.

⁷⁴ National Park Service. “National Register of Historic Places.” National Park Service, Updated: July 11, 2023. <https://www.nps.gov/subjects/nationalregister/index.htm#:~:text=Authorized%20by%20the%20National%20Historic,America's%20historic%20and%20archeological%20resources.>

Figure 51. Map of State and National Register sites and districts, and the Neighborhood Design Overlay District in Charlestown. Sources: MACRIS maps. <https://maps.mhc-macris.net/>; and Boston Zoning Map 2D.

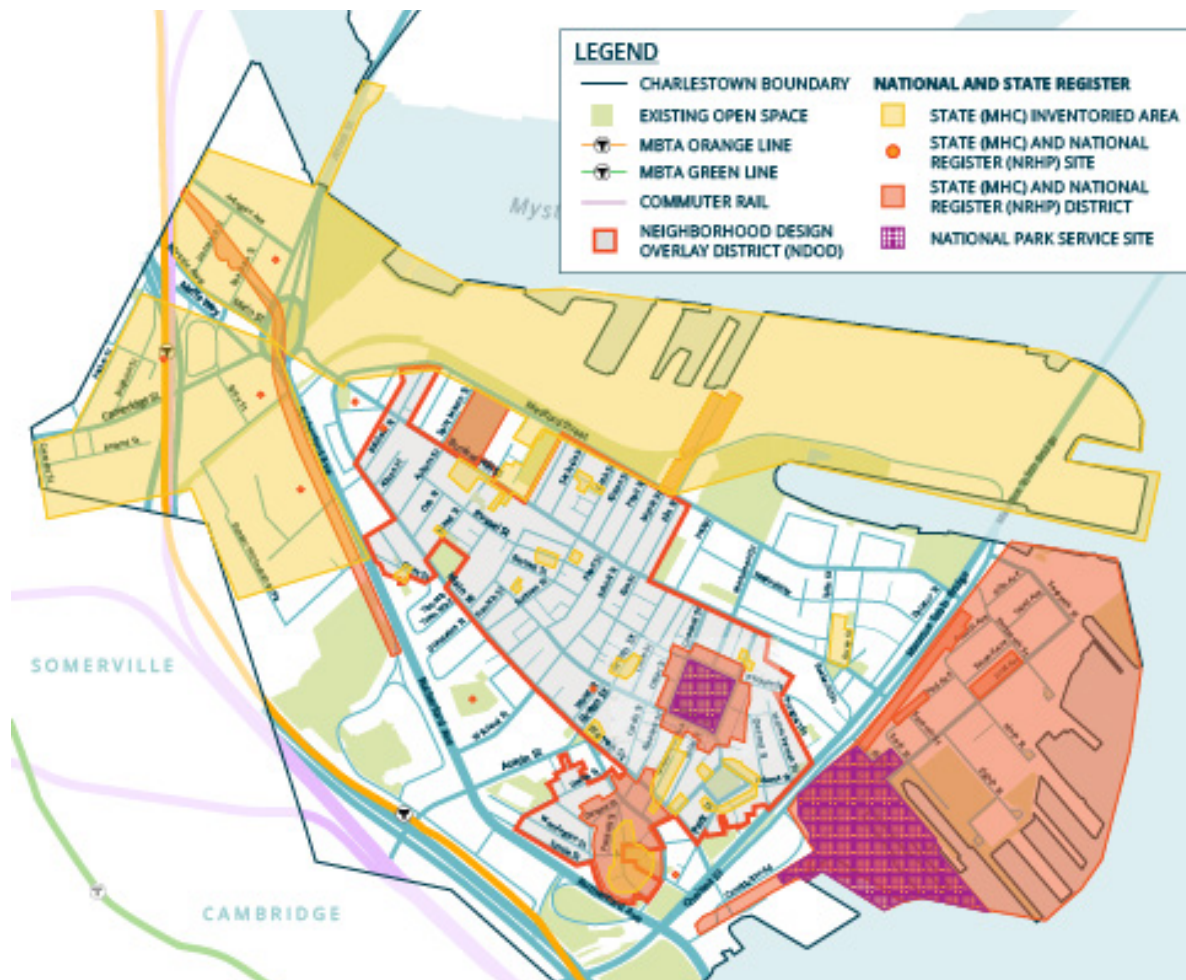


Figure 51

Listing in the National Register is a “step towards eligibility for National Park Service-administered federal preservation tax credits”, which can make preservation, maintenance, and adaptive reuse more financially feasible.⁷⁵ Inclusion in the State Register of Historic Places, which comes automatically with National Register listing, also provides eligibility for matching state grants for restoration of properties owned by private nonprofit organizations and municipalities.

Neighborhood Design Overlay District (NDOD)

Article 62 of Boston’s Zoning Code establishes Charlestown’s Neighborhood Design Overlay District (NDOD) to provide additional preservation protections at the local level. NDODs have been established in various places across the city to protect the existing scale, quality of the pedestrian environment, character of the residential neighborhoods, and concentrations of historic buildings. NDODs require design review by BPDA Urban Design staff for any project proposing to change roof shape or building height, extend the building over 300 square feet, change the building massing, or alter over 300 square feet of exterior wall area.

Most forms of landmark designation by the OHP nullifies the design review requirement of the NDOD, because design review is instead performed by the OHP for all proposed projects. However, NDODs often coincide with National Register districts, but where there is not yet a local landmarks designation, NDODs serve as a stopgap for historic design review. In addition to design provisos for NDOD review, projects that go before the ZBA should consider the urban design guidelines which are meant to protect historic character in the Original Peninsula. One of the greatest weaknesses of NDODs is that, unlike OHP landmark designation, they cannot stop or stall proposed demolition. Instead, demolition is regulated by Article 85 of the Boston Zoning Code.

Article 85 - Demolition Delay

The purpose of Article 85 is to establish a predictable process for reviewing requests to demolish certain buildings, to establish an appropriate waiting period during which the City and the Applicant can propose and consider alternatives to the demolition of a building determined to have historical, architectural, cultural or urban design value, to provide an opportunity for the public to comment on the issues regarding the proposed demolition, and to minimize the number and extent of building demolitions where no immediate re-use of the site is planned.

⁷⁵ National Register of Historic Places. “What Is the National Register of Historic Places?” National Park Service, December 28, 2022. <https://www.nps.gov/subjects/nationalregister/what-is-the-national-register.htm>.

Figure 52. Aerial photo of Bunker Hill Monument.



Figure 52

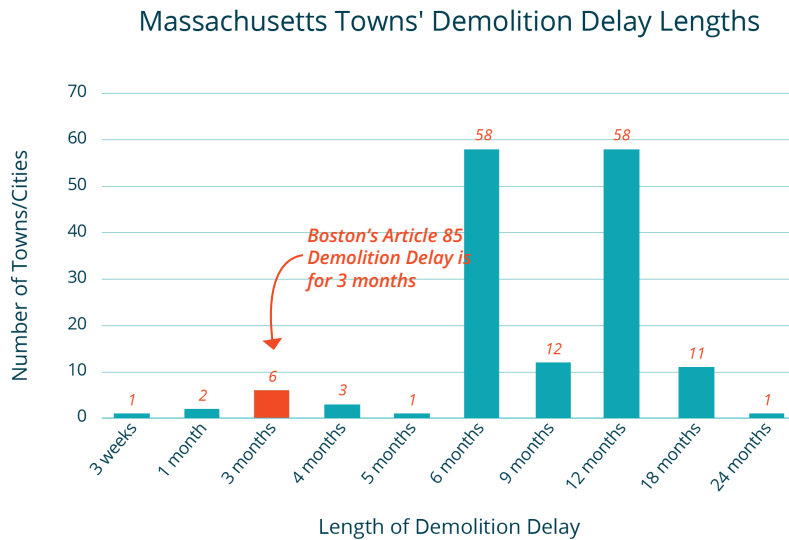


Figure 53

Revisiting the purpose of Article 85 to achieve beneficial environmental outcomes could also be designed to advance preservation goals.

Length of Delay

Increasing the length of the demolition delay may be a deterrent to demolition.

An extended delay would give demolition proponents the time to consider best practices for alignment with the City's Zero Waste Deconstruction Initiative, which encourages environmentally responsible adaptive use and deconstruction practices.

RECOMMENDATIONS

In coordination with the Office of Historic Preservation (OHP), this PLAN identifies four steps that the City should take to further preservation goals:

1. Complete an updated inventory of historic resources in Charlestown that builds upon past work and accounts for new recommendations.
2. The Office of Historic Preservation (OHP) will continue to review the petitions for landmarks and districts submitted by the community.
3. OHP should continue the process of the designation of Monument Square district. The district study report was completed in June 2023 and is awaiting confirmation of nomination
4. Development projects that request relief from the ZBA should consider historic character in the Original Peninsula and Lost Village
5. The OHP and MHC should continue to nominate landmarks in Charlestown to the National Register of Historic Places.
6. Reform the Boston's Zoning Code's Article 85, Demolition Delay, citywide.

For more information on the implementation of these recommendations, please refer to Chapter 7 of this PLAN.

⁷⁸ City of Somerville. "Proposed Changes to the Demolition Review Ordinance." City of Somerville. Accessed July 17, 2023. <https://www.somervillema.gov/departments/planning-and-zoning/proposed-changes-demolition-review-ordinance/>.

⁷⁹ City of New Bedford. "Guide to the Demolition of Buildings Ordinance." NB New Bedford: Planning. Accessed July 17, 2023. <https://www.newbedford-ma.gov/planning/historical-commission-demolition-ordinance/>.

⁸⁰ Mayor's Office of Environment, Energy and Open Space, Deconstruction in Boston § (2022). <https://docs.google.com/document/d/1FR0GV5xHlgD3CmXw22Zusn8jQ1heNYUMnaz3nGnEGZl/edit>

⁸¹ Town of Lexington, Historical Commission, Article 44 - Demolition Delay Amendments § (2018).

Figure 53. Massachusetts towns' demolition delay lengths graph. Source: Preservation Massachusetts. "Historic Preservation: Preservation Massachusetts: United States." PreservationMA. Accessed August 29, 2023. <https://www.preservationmass.org/>.

Arts and Culture

INTRODUCTION

The term “arts and culture” encompasses creative uses such as museums, public art installations, visual and performing arts, artist studios, and rehearsal space. Maintaining and growing arts and culture uses and spaces is critical to a neighborhood's vitality because they contribute to the concept of ‘place.’ The active term for maintaining a sense of place - placemaking - refers to development of spaces that give them an identity reflective of the community it is located in. Arts and culture can contribute to placemaking in the form of public performances such as plays or concerts, murals or temporary installations, and educational venues that illuminate the community's history. Additionally, the arts and culture sector is a massive economic engine, generating over \$2 billion for the Boston economy each year.⁷⁶ The content of this needs analysis covers the existing arts and culture assets within Charlestown, City resources dedicated to supporting these uses, and areas where Charlestown can not only preserve, but expand the opportunity for arts and culture within the neighborhood.

⁷⁶ ArtsBoston. “The Arts Factor 2019: Changing Lives and Creating Community.” ArtsBoston, 2019. <https://www.artsboston.org/artsfactor-2019/>.

⁷⁷ National Park Service. “Boston: Bunker Hill.” National Park Service, Updated: July 3, 2023. <https://www.nps.gov/bost/learn/historyculture/bhm.htm>.

Figure 54. Photo of Warren Tavern, Charlestown. Photo by BPDA staff.

EXISTING ASSETS

Organizations and Institutions

Charlestown has a strong cultural sense of patriotism. The most well-known cultural assets in Charlestown are related to the Revolutionary War, where the Battle of Bunker Hill took place in 1775 as the first major battle between English and Patriot forces.⁷⁷ Today, the site of the historic battle is marked by a 221-foot granite obelisk completed in 1843, which also serves as a signature marker of the Charlestown neighborhood from vantage points within and even beyond the city. Additionally, the Bunker Hill Museum, located just across High Street from the Bunker Hill Monument, is dedicated to telling the history of the Battle of Bunker Hill, the construction of the Monument, and the history of Charlestown. The neighborhood celebrates its history annually in June with the Bunker Hill Day Parade, and a week of community events. The monument is maintained by the National Park Service as part of the Boston National Historic Park.

City of Boston Arts + Culture Related Departments:

Mayor's Office of Arts and Culture (MOAC)

*Policies and programs
include:*

- Boston Arts Commission
- Boston Creates Plan

Boston Cultural Council

*For more information, refer
to Appendix A.*



Figure 54

In addition to the Bunker Hill Monument and Museum, Charlestown is home to the USS Constitution Ship and Museum. The USS Constitution (“Old Ironsides”) is the oldest commissioned warship still afloat in the world. It has been active since 1797, and is still considered an active-duty Navy vessel.⁷⁸ The museum is a private, non-profit institution that was formally incorporated in 1972 to showcase the ship’s history and role in early America.

Publicly Accessible Art

In the Charlestown Navy Yard, museums, the Harborwalk, and marinas converge into a well-used public realm. Heavily trafficked areas are perfect candidates for public art displays. The Charlestown Navy Yard has been a long-time host of many public art displays, most recently hosting the installation of artist Michael Alfano’s sculptures called “Of Many Minds” (figure 55). A recently completed permanent light installation called “Navy Yard Night Skies,” first done by Zach Lieberman, is a suspended series of lights activated by video artists, is located in the amphitheater of the Shipyard Park.

Much of this work is accomplished through partnerships borne of the complex land ownership in and around the Navy Yard, which includes both public and private land. The Navy Yard Garden & Art, Inc is an independent volunteer organization focused on revitalizing plantings in Shipyard Park, promoting public art, and offering free programming throughout the Charlestown Navy Yard. They are an important partner in activating and maintaining publicly accessible cultural assets in this part of Charlestown.

⁷⁸ USS Constitution Museum. “Museum History.” USS Constitution Museum. Accessed July 17, 2023. <https://ussconstitutionmuseum.org/about-us/museum-history/>.

Figure 55. Photos of public art around the Charlestown Navy Yard. Photos by BPDA staff.



Figure 55



Figure 50

Performing Arts

Charlestown has one dedicated performing arts venue, the Charlestown Working Theater (“CWT”), which is located just south of Sullivan Square at 442 Bunker Hill Street. The building is an adaptively reused fire station, built in 1884, and transferred to the CWT in 1980 (figure 56). CWT offers original performances as well as works based on other theater companies and artists. They also provide rehearsal, performance, and community space to local theater companies and community groups, and offer a range of youth programs and classes.

Art/Rehearsal Studios, and Galleries

Art studios and galleries where visual artists can both make and display their work are fundamental to a healthy arts and culture economy. There are just a few active art studios in Charlestown, including the Stove Factory Gallery, which is managed by the Artists Group of Charlestown.

Helping to bring up a new generation of local artists, the Essem Art Studio is a youth focused studio, offering art classes for young children, after school art clubs, and ‘mini-art camps’ during school vacations.

50 Terminal Street Building 1 is a venue for musicians and other artists to rehearse live music the Charlestown Rehearsal Studios, which consists of 95 rehearsal rooms and an estimated 700 artists who use the space.⁷⁹ Building 1 was recently sold and the future of the tenants in this space is uncertain.⁸⁰ The City of Boston’s Mayor’s Office of Arts and Culture (MOAC) and the Charlestown Rehearsal Studios Tenants Association Steering Committee (CRS TASC) have been working with the new building owner to increase the length of time the rehearsal studios will be able to stay in their current location, but a new home may be needed in the future. 50 Terminal Street Building 2 contains a number of small businesses, including some in creative industries.

7 Sherman Street is another building which serves artists in Charlestown, containing studios, as well as space for various other kinds of art production.

⁷⁹ Estimated artist count provided by the Charlestown Rehearsal Studios Tenants Association Steering Committee (CRS TASC).

⁸⁰ Deng, Olivia. “Charlestown Rehearsal Studios Has an Uncertain Future and Unclear Past.” WBUR News, January 25, 2023. <https://www.wbur.org/news/2023/01/25/charlestown-rehearsal-studios-musicians-boston>.

Figure 56. Photo of the Charlestown Working Theatre. Photo by BPDA staff.



Figure 57

RECOMMENDATIONS

1. Maintain existing cultural assets in Charlestown. The first priority for arts and culture in Charlestown is to not lose what the neighborhood already has, which may be put in danger due to economic factors like rent, possible displacement, or other threats. Continuing to support artists through grants is key, as is the utilization of MOAC as an advocacy body for local artists.
2. MOAC should continue to participate in development review to ensure that the spatial and programming needs of arts and culture uses are considered and accommodated in new private development. Public benefits in Charlestown should prioritize the creation of more artist work space and new affordable musician rehearsal spaces.
3. New locations for public art. Today in Charlestown, the Navy Yard has an abundance of public art, but the rest of the neighborhood, and the larger city, do not share that same wealth. The residential core of Charlestown, the Lost Village, and the areas west of Rutherford Avenue should all be prioritized for public art creation.
4. MOAC and the BPDA should involve local arts and culture stakeholders in evaluating arts related impacts from new development through participating in public processes and nominations to advisory committees.
5. Implement the coming recommendations of the Metropolitan Area Planning Council's Making Space for Art study, expected December 2023.⁸¹
6. Identify gaps Citywide in affordable work space for various creative uses - especially for uses that are currently at risk of losing space or cost-burdened by existing space - to ensure the long-term viability of the arts and culture economy in the City and how new growth in Charlestown can support identified needs. This was a key recommendation of the Boston Creates Plan.
7. Reduce restrictions on arts and culture uses in Multifamily Residential (MFR), Local Convenience (LC), Neighborhood Shopping (NS), and Local Industrial (LI) subdistricts across the neighborhood. For more information on this recommendation, refer to the Zoning section of the Needs Analysis chapter of this PLAN.

⁸¹ MAPC. "Making Space for Art: Securing Cultural Infrastructure in Boston, Cambridge & Somerville." MAPC. Accessed July 17, 2023. <https://www.mapc.org/resource-library/making-space-for-art/>.

Figure 57. 50 Terminal Street.
Photo by BPDA staff.

Mobility

With just a mile separating the heart of Charlestown and Downtown Boston, Charlestown is home to and surrounded by a richness of cultural and economic opportunities. The neighborhood is also exceptionally compact; at just three-quarters of a mile wide and 1.25-miles in length, all corners of Charlestown can be reached within a very short travel distance. Coupled with access to the Orange Line, a dozen bus routes, highway access points, and a ferry terminal, the compact footprint of the neighborhood and proximity to major employment and cultural centers gives Charlestown exceptionally strong transportation bones.

Even with these strengths, Charlestown faces unique transportation challenges. Virtually all of the neighborhood's major transportation assets - and in particular transit stations - are located along Charlestown's edges and away from the neighborhood's most densely populated areas. For those close enough to walk, Rutherford Avenue, Sullivan Square, and I-93 make the trip to/from the Orange Line both longer and less pleasant. Wide streets, few bike lanes, and heavy vehicle traffic all contribute to a challenging experience for people biking to and from stations. The neighborhood is also one of the hilliest in Boston, which can make traveling in Charlestown difficult for disabled residents and people traveling on foot or by bike.

While the small footprint of the neighborhood makes for relatively quick and easy trips to get from place to place within Charlestown, trips between Charlestown and other areas of the region are strongly impacted by both natural and built barriers that surround and bisect the neighborhood. To the west and north, a complex web of at-grade and elevated rail and highway infrastructure limit the options for crossing into Cambridge and Somerville to just a few streets. To the east and south, the Mystic River, Boston Inner Harbor, and the Tobin Bridge physically and visually separate Charlestown from Everett, East Boston, and Downtown.

“The biggest issue is getting to Charlestown from other neighborhoods. It’s so isolated by huge roadways”

- Charlestown stakeholder

Though many of these barriers carry vital local and regional transportation assets like the Orange Line, Commuter Rail, and highway systems, they also restrict access to and from the neighborhood. As a result, access to and from the neighborhood is restricted to three primary gateways through which virtually all travelers must pass: Sullivan Square, City Square, and the Gilmore Bridge. These gateways are both an effective transportation management tool that help protect much of Charlestown from regional traffic and create pinch points that can make traveling to and from the neighborhood frustrating and circuitous for travelers of all modes. In some cases, the few entry and exit routes lack even basic infrastructure such as sidewalks, further restricting multimodal access to Charlestown. As a result, even though a richness of transportation options are contained within the borders of the neighborhood, they can feel out of reach for many.

Owing to the natural and built barriers in Charlestown, transportation conditions are distinct across the Original Peninsula, the Lost Village, the Navy Yard, and the Sullivan Square/Rutherford Ave area. As a result, the most significant challenges affecting residents in one part of the neighborhood may not be shared by neighbors in another. Notably, areas where future development is expected to be concentrated have few existing streets or sidewalks which will be essential to support future residents and visitors.

With PLAN: Charlestown, the entirety of Charlestown's transportation needs are examined in the context of citywide transportation goals established through Go



Figure 58

Key Challenges	Original Peninsula	Lost Village	Navy Yard	Sullivan Sq / Rutherford
Traffic Safety: Instances of serious and fatal crashes	X	X	X	X
Proximity to Rapid Transit: Limited access to the Orange Line	X		X	
Neighborhood Connectivity: Limited access to destinations in Charlestown		X	X	X
Regional Roadway Connectivity: Limited access to regional roadway networks	X		X	
Regional Traffic: Negative health and quality of life impacts of regional through traffic		X		X

Figure 58. Existing Transportation Networks in Charlestown

Figure 59. Key Transportation Challenges Across Charlestown

Figure 59



Figure 60

Go Boston 2030 Targets

- **Safety:** Traffic fatalities and severe injuries will be eliminated
- **Access:** Every Bostonian will live within a 10 minute walk of rapid transit, bikeshare, and carshare
- **Reliability:** Citywide average commute to work time will reduce by 10%

⁸² Boston Transportation Department. "Go Boston 2030." Boston.gov, 2017. <https://www.boston.gov/departments/transportation/go-boston-2030>.

⁸³ Massachusetts Bay Transportation Authority. "Bus Network Redesign Proposal." MBTA, 2022. <https://www.mbtta.com/projects/bus-network-redesign/update/bus-network-redesign-proposal>.

Figure 60. Ongoing Bus Network and Major Infrastructure Projects in Charlestown

Figure 61. Percentage of Charlestown Households within 10-minutes of Rapid Transit, Bikeshare, and Car Share

Boston 2030, the City's comprehensive transportation plan.⁸² Published in 2017, *Go Boston 2030* is built around the principle that transportation by all modes should be safe, readily accessed, and reliable. In the section that follows, a wide range of data and community input are used to illustrate existing transportation conditions and identify recommendations that will uphold the City of Boston's commitment to providing transportation systems that not only get people from place to place, but contribute to a high quality of life.

ONGOING TRANSPORTATION PROJECTS

Numerous ongoing transportation projects – including some of the region's largest investments – are already underway in Charlestown. Covering major roadway reconstructions, bridge rehabilitations, and transit service upgrades, these projects are already in motion and will provide significant transportation choice and quality benefits in Charlestown.

Rutherford Avenue/Sullivan Square | Expected completion: 2030

Currently anticipated to begin construction in 2027, this state-funded project will break down some of Charlestown's most significant neighborhood barriers. In place of the existing highway cutting through the neighborhood, Rutherford Avenue will be reconstructed to create a multimodal boulevard that not only carries local and regional vehicle traffic, but also provides space for rapid bus service, separated paths for walking and biking, new and safer pedestrian crossings, and generous landscaping. At Sullivan Square, a new street grid in place of the existing traffic circle will create more direct and safer access to Sullivan Square Station.

Orange Line Transformation | Expected completion: 2030

The MBTA's ongoing Orange Line Transformation initiative is upgrading the 120-year old rapid transit line to provide faster, more frequent, and more reliable service. Upon completion, the Orange Line will have space for 30,000 more riders every day and trains will run every 4.5 minutes for peak hours.

Bus Network Redesign | Expected completion: 2029

The MBTA's Bus Network Redesign reimagines the entire existing bus network to align the transit system with shifting demographics, travel patterns, and emerging employment districts. Along Main Street (Route T101) and Medford Street (Route T7), the new bus network will include service every 8-15 minutes depending on time of day and a modified route will create a bus transfer at Community College station.⁸³ Once implemented, virtually every Charlestown resident will live within a five minute walk of the Orange Line or a frequent bus.

N Washington St Bridge | Expected completion: 2025

The North Washington Street bridge is currently under construction. Once completed, the new bridge will create a multimodal upgrade to the Freedom Trail

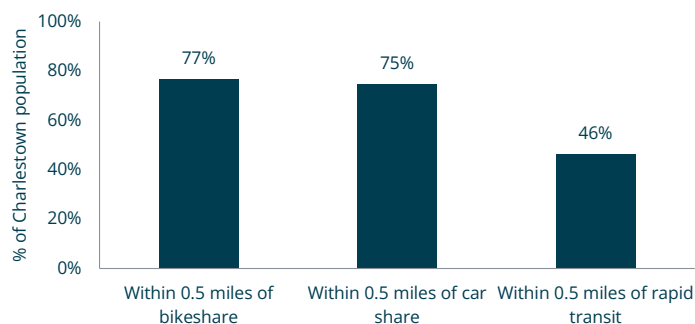


Figure 61

by providing sidewalks, separated bike lanes, a dedicated bus lane, vehicle travel lanes, and landscaping for travelers crossing the harbor.

Mystic/Maffa Bridges | Expected completion: 2026

A full structural replacement of the Mystic and Maffa bridges will begin in Fall 2023. The project provides a generational opportunity to create multimodal connections to Charlestown and will include wide sidewalks and separated bike lanes, a dedicated bus lane on Maffa Way, and vehicle travel lanes.

Cambridge St Bridge | Expected completion: 2026

Work to rehabilitate the Cambridge Street bridge is expected to begin in 2025. While the structure of the bridge is expected to remain as-is, the reconstructed surface will improve multimodal facilities for this key connection to Somerville.

Gilmore Bridge | Expected completion: 2033

The Massachusetts Department of Transportation is beginning to evaluate options for the future of the Gilmore Bridge. This project is in the earliest phases of planning and will ultimately result in plans for reconstructing or rehabilitating the bridge to meet modern travel demands.

Access to Transportation Options

Providing every household with access to rapid transit (i.e. high-frequency buses and subway service), bikeshare, and car share is a key goal of Go Boston 2030. Though virtually all Charlestown residents live close to a bikeshare station or a public car share location, a much smaller area of the neighborhood is within a short walking distance of the neighborhood's two existing rapid transit stations. Because existing high-frequency transit options are clustered along the western edge of the neighborhood, only 46% of Charlestown residents live within a 10 minute walk of rapid transit, bikeshare, and car share (figure 61). Virtually all of the Navy Yard and much of the neighborhood north and east of the Bunker Hill monument fall outside of a 10-minute walk of either Sullivan Square Station or Community College Station. Critically, many of Charlestown's most transit-dependent residents are poorly served by existing rapid transit options; large areas of Charlestown that have below-average car ownership characteristics also have the worst access to rapid transit.

With major improvements in bus service on Main Street and Bunker Hill Street planned in the near future, 100% of Charlestown residents will be within a short walking distance of rapid transit. Plans for the MBTA's full overhaul of the existing bus network were completed last year and include significant upgrades in service along both Main Street and Bunker Hill Street. With service every 8-15 minutes for the proposed Route 101 (Medford to Kendall Square via Main Street) and Route 7 (Sullivan Square to South Boston via Bunker Hill Street), every Charlestown resident will have access to a high-frequency transit option within a short walk of their home, and new important destinations like the Community College Orange Line station, Lechemere and the Green Line, Kendall Square and the Red Line, and the Seaport will be made possible on a one-seat ride that today require one or more transfers.

Travel Trends

Nearly 40% of Charlestown residents work close to home; as a result, Charlestown residents walk and bike to work more than the average Boston resident.^{84 85} A combined 42% of Charlestown residents walk, bike, or take public transit for their daily commute. Even with few existing bike lanes, Charlestown residents are nearly twice as likely to bike to work as the average City of Boston resident. Although 81% of Charlestown households have a car available, only 40% drive or carpool to work. In addition, a larger share of Charlestown residents – 17% – work from home compared to 14% citywide.

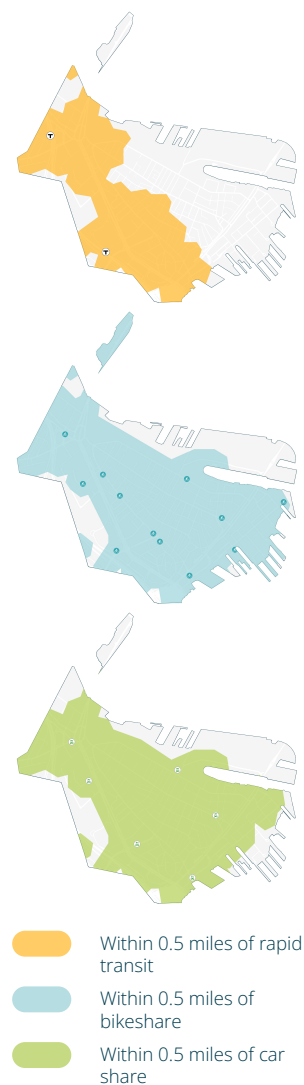


Figure 62

⁸⁴ Commuter flows : Employment and Residence Patterns in Greater Boston, BPDA Research Division, August 2016

⁸⁵ U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates.

Figure 62 . Maps of Charlestown Households within 10-minutes of Rapid Transit, Bikeshare, and Car Share

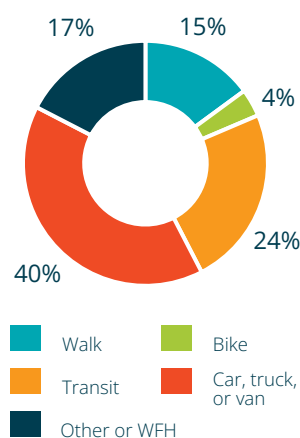


Figure 63

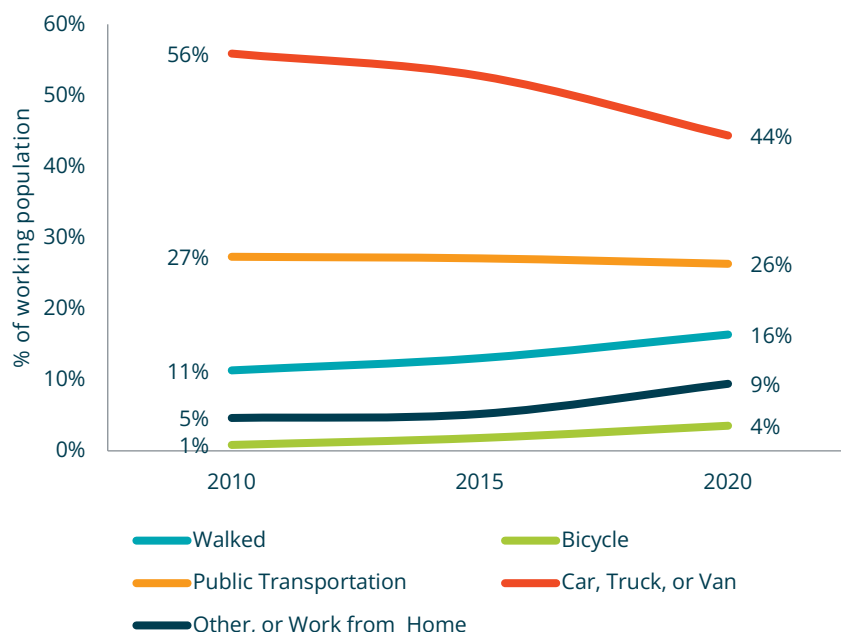


Figure 64

⁸⁶ City of Boston Vision Zero Crash Records, 2019-2021, excluding crashes on state-owned roads

Figure 63. Means of Transportation to Work for Charlestown and City of Boston, 2017-2021

Figure 64. Change in Charlestown Commuting Patterns, 2010 to 2020

These travel patterns reflect both the unique transportation characteristics of Charlestown and the location of residents' jobs. Approximately 41% of Charlestown residents work in either Charlestown, Downtown Boston, the West End, or Cambridge, all of which are within close walking and biking distance of many areas of Charlestown. The travel patterns of Charlestown residents have also changed significantly since 2010. Rates of driving have dropped by over 20%, while rates of walking and biking have increased by 45% and 300%, respectively.

Even within Charlestown, travel patterns are substantially different across the neighborhood. In the areas of Charlestown closest to Downtown, over 20% of residents walk for their daily commute compared to 10% of residents who live deeper in the neighborhood. A significantly larger share of residents – up to eight percent – in the City Square area and within parts of the Original Peninsula bike to work compared to just two percent citywide. Meanwhile, areas of the neighborhood that are furthest from transit connections and the gateways into and out of the neighborhood drive at higher rates. As Charlestown's population has grown, car ownership per person has decreased slightly. Since 2010 Charlestown's population has grown by roughly 24%, but the estimated number of cars in Charlestown has only increased by 21%.

In addition, 19% of households in Charlestown do not have a car. However rates of car ownership vary considerably across the neighborhood. While under 10% of households in the northern portion of the neighborhood live without a car, up to 30% of households in other areas of the neighborhood are zero-car households. The uneven distribution of no-car households means that residents in some parts of the neighborhood are far more reliant on walking, biking, and transit for their daily travel needs.

TRANSPORTATION SAFETY

Between 2019 and 2021, 220 crashes requiring emergency response occurred within Charlestown, including three fatal crashes.⁸⁶ Compared to the City of Boston as a whole, crashes involving pedestrians are less frequent in Charlestown while crashes involving only motor vehicles are more frequent. Crash data reveals that the rate of crashes involving bicyclists is particularly high

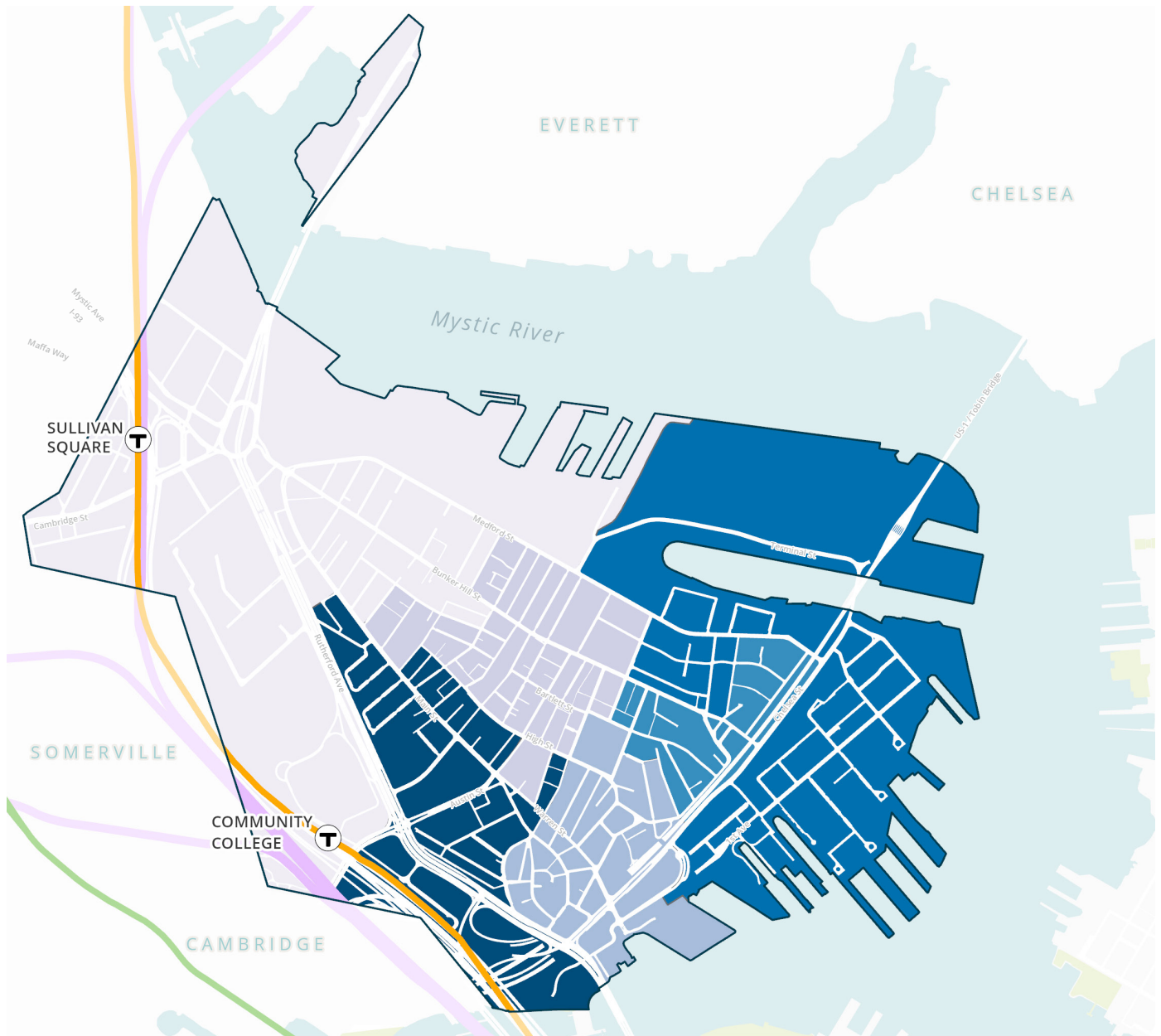


Figure 65

given the share of Charlestown's population that bikes. While data suggests that bicyclists make up three to four percent of travelers in Charlestown, they are involved in nine percent of the neighborhood's crashes.⁸⁷

In Charlestown, data show that pedestrians in particular bear a disproportionate burden of the most serious crashes. Even though pedestrians were involved in a smaller number of crashes than any other mode, all three people who lost their lives in traffic crashes in Charlestown between 2019 and 2021 were walking. Because people who walk and bike travel without protection from the shell of a vehicle, crashes that involve pedestrians and bicyclists are far more likely to result in a life-changing injury or fatality.

In general, serious crashes in Charlestown are less common on the neighborhood's smaller residential streets and instead are concentrated on larger and busier streets. Over two-thirds of crashes requiring an emergency

⁸⁷ U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates and Boston Bikes Count Program, Main Street South of Sullivan Square, 2022

Figure 65. Percentage of Households Without Access to a Car.

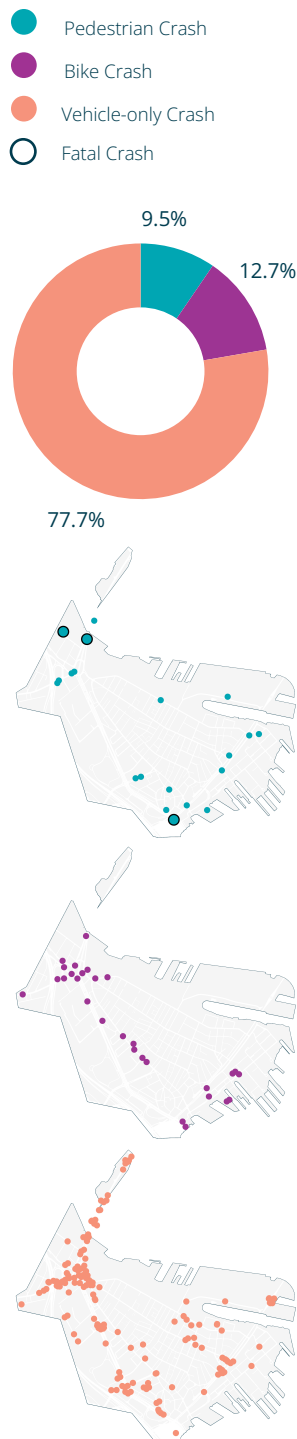


Figure 66

Figure 66. Crashes by Mode in Charlestown, 2019-2021

Figure 67. Crashes that Required an Emergency Response by Mode and Location, 2019-2021

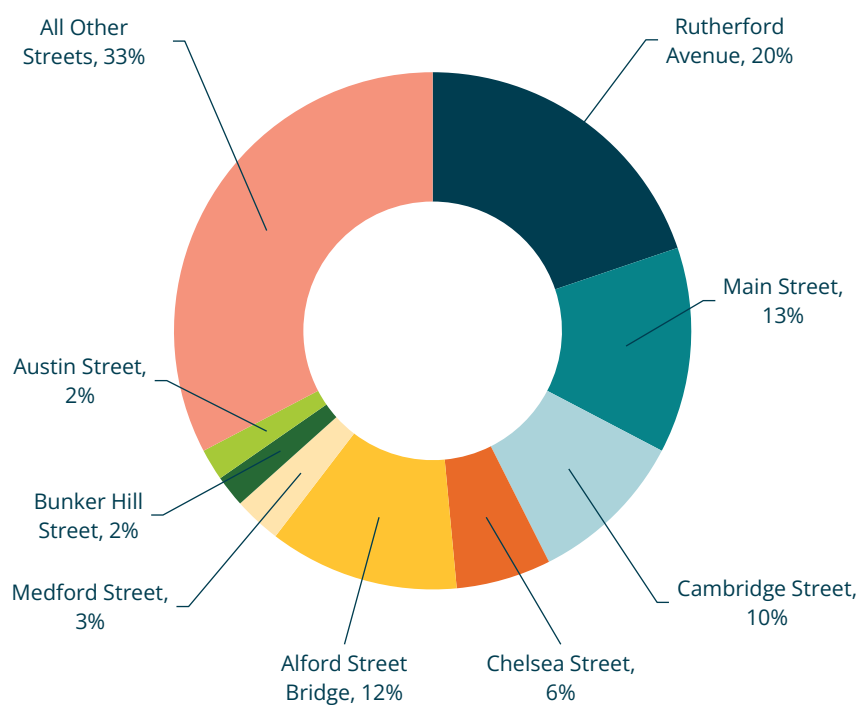


Figure 67

response in Charlestown occurred on a small handful of major streets in Charlestown, such as Main Street, Chelsea Street, Medford Street, and Bunker Hill Street. Nearly one in five crashes occurred on Rutherford Avenue and an additional 13% took place on Main Street. Notably, over 40% of the crashes that took place over these three years occurred on a street with an active infrastructure project that will help address underlying safety issues. Further study of conditions on Charlestown's major streets will help identify solutions for safety and other transportation needs that may be incorporated into ongoing projects or become standalone projects on their own.

From 2019-2021, crashes involving pedestrians occurred almost exclusively on the edges of the neighborhood. Though the total number of crashes during this time period are too few to establish patterns, the limited number of crashes that took place within the well-established streets of the Original Peninsula stands out in comparison to the relative concentration of pedestrian crashes that occurred on larger streets within the neighborhood. Chelsea Street in particular stands out as having an unexpectedly high volume of pedestrian crashes: Of the 22 pedestrian crashes that took place within the neighborhood between 2019-2021, over 20% (5 crashes) took place at an intersection on Chelsea Street.

Crashes involving bicyclists were strongly concentrated along Main Street, in Sullivan Square, and in the Navy Yard between 2019 and 2021. Crashes within these three areas accounted for roughly 75% of all bike crashes that occurred during this three year period. Of particular note, Main Street is not only a crash cluster for bicyclists in Charlestown but is among the highest crash locations for bicyclists citywide. Between 2019 and 2021, five serious bike crashes took place on the quarter-mile stretch of Main Street between Austin Street and Elden Street. This segment of Main Street has had more serious bike crashes than over 97% of the 836 miles of street that are maintained by the City.

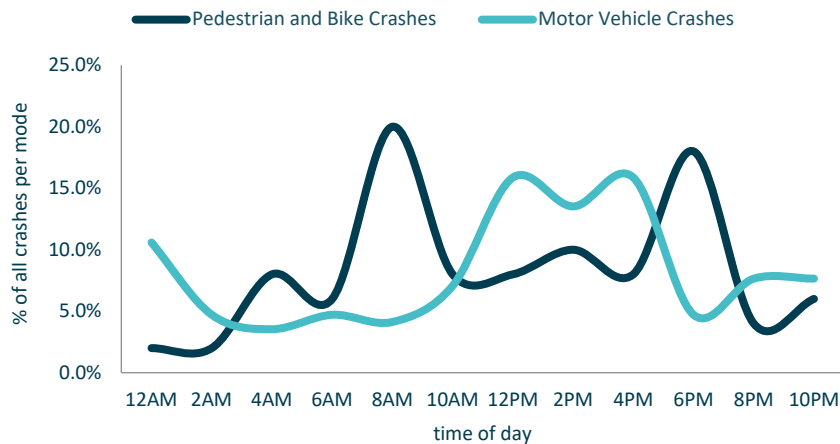


Figure 68

Though motor vehicle crashes occurred throughout the neighborhood, there were concentrations of crashes around Charlestown's most complex intersections including Sullivan and City squares. In addition, nearly 30% of serious motor vehicle crashes that occurred in the neighborhood from 2019-2021 took place on major highways (I93 or Route 1). Within the core of the neighborhood, crashes involving motor vehicles were most common on Main Street, Chelsea Street, and around the Bunker Hill Housing development.

Nearly 50% of all crashes involving people walking and biking occur during just six hours of the day: 8AM-10AM, 2PM-4PM, 6PM-8PM. In general, activity by all modes is high during these time periods, creating more possible conflicts between people walking, biking, and driving. However, serious crashes involving motorists follow a different trend. For people driving, serious crashes requiring an emergency response are less common during congested hours when people are generally driving slow and are more common during periods of low activity when the streets are relatively empty and people are able to drive faster.

PEDESTRIAN AND ACCESSIBILITY CONDITIONS

Most of Charlestown has a well-established sidewalk network, however uneven surfaces, narrow sidewalks, and substandard curb ramps create mobility challenges for many people. Throughout much of Charlestown, sidewalk widths are narrow and impeded by street furniture and utilities such as fire hydrants, light poles, and street signs. In addition, only 10% of existing curb ramps in Charlestown are compliant with the Americans with Disabilities Act, which sets standards for how public spaces must be designed such that they are navigable by people with a range of disabilities.⁸⁸ This is not unique to Charlestown; across the City, roughly 13% of ramps are compliant with disability standards. Though it will take time, the City is moving forward toward addressing this citywide mobility injustice. Per an order signed in 2021, the City of Boston is required to install or upgrade over 1,500 curb ramps throughout the City each year until every curb ramp within the City of Boston's right-of-way meets federal disability standards. In Charlestown, the numerous major infrastructure projects planned to commence over the coming years will present natural opportunities to significantly upgrade accessibility along many of Charlestown's most significant streets.

Heat also has a large impact on the pedestrian experience, especially in the center of the neighborhood. For more information on the role street design can play in heat mitigation, refer to the Climate Resilience section of the Needs Analysis chapter.

⁸⁸ City of Boston 2021 Pedestrian Ramp Data Inventory

Figure 68. Crashes in Charlestown by Mode and Time of Day, 2019-2021

Figure 69. Percentage of Intersections with Marked Crosswalks on Major Streets

Cambridge St	71%
Chelsea St	56%
Medford St	52%
Bunker Hill St	68%
Warren St	89%
Main St	45%
Rutherford Ave	45%

Figure 69

Figure 70. Walking Time in Minutes Between Crosswalks on Major Streets

“Medford Street can feel really dangerous for crossing, especially with children because cars go very fast ...”

- Charlestown stakeholder

Crosswalk Spacing

While many of the neighborhood’s primary streets provide consistent and frequent crosswalk spacing, along some streets under half of all intersections have a marked crosswalk. In Massachusetts, a person crossing the street at an intersection has the right of way regardless of whether a crosswalk is marked. On residential streets with limited traffic, marked crosswalks are often not necessary to accommodate people crossing the street; the low-volume and low-speeds of vehicle traffic create a naturally comfortable environment for people to cross. However, on streets that carry higher volumes of pedestrian, vehicle, and bicycle traffic and on streets with many destinations, marked crosswalks and even pedestrian signals are important to help communicate an expectation for people crossing the street. On Charlestown’s major streets, between 45% and 89% of intersections are marked with a crosswalk.

Given the closely-spaced intersections throughout much of Charlestown, not every intersection necessarily needs a crosswalk. However, in active areas where intersections, destinations, and bus stops are frequent, people walking are unlikely to go far out of their way to cross the street even if no marked crosswalk is present. In Charlestown, the importance of providing convenient crossings is clear from crash data; over 75% of pedestrian crashes occurred at locations where no crosswalk is provided to help people safely cross the street.

While streets like Warren, Bunker Hill Street, and parts of Main streets provide a consistent and short distance between crosswalks, other streets including Medford Street, Chelsea Street, and Cambridge Street have relatively long distances between crossings. On Medford Street, no crosswalks are provided for nearly 2,000 feet (an approximately 11 minute walk) while on Chelsea Street and Cambridge Street the longest distance between crosswalks is over 1,500 feet and 850 feet, respectively. Through future projects, long gaps in between crosswalks should be reduced on these main streets.

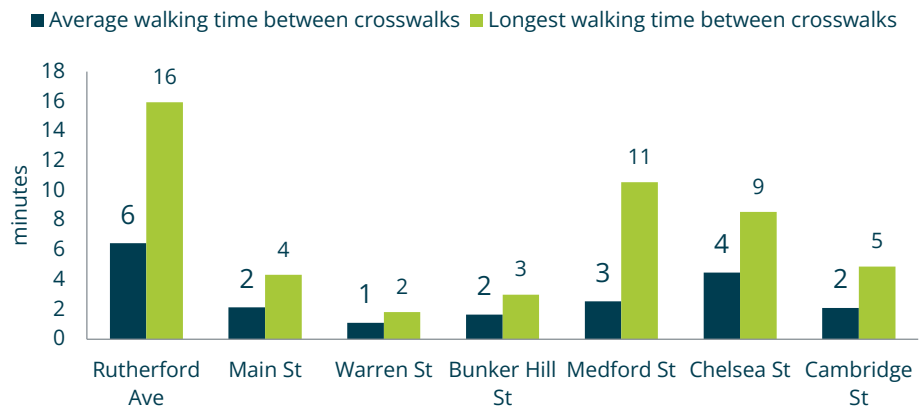


Figure 70

Rutherford Avenue has both the highest average and maximum distance between crosswalks in Charlestown. As the Rutherford Avenue/Sullivan Square Redesign project anticipates more jobs, residences, and neighborhood destinations west of Rutherford Avenue, more frequent crossings will be essential.

BIKING CONDITIONS

Charlestown has very few existing bike lanes. Today, Charlestown’s bike network is restricted primarily to the edges of the neighborhood with one primary spine – Main Street – connecting bike lanes and paths at the southern and northern tips



Figure 71

of the neighborhood (figure 66). Even though the existing network is very limited, the proximity of Charlestown to a wealth of jobs and destinations has resulted in rates of biking that are twice as high in this neighborhood as they are elsewhere in the city.

Ongoing projects including the reconstruction of the North Washington Street bridge, Mystic Avenue and Maffa Way bridge replacements, and reconstruction of Rutherford Avenue will significantly expand the bike network in parts of Charlestown. Though these projects will primarily improve the quality of biking infrastructure along the edges of the neighborhood, these new connections will support existing and future riders in Charlestown, as well as regional recreational and commuting trips. Critically, these connections will strongly support the

Figure 71. Existing Estimated Level of Comfort Experienced by Bicyclists. Source: Boston Transportation Department. "Bicycle Level of Traffic Stress Map." Boston.gov, Updated: September 22, 2021. <https://www.boston.gov/departments/transportation/bicycle-level-traffic-stress-map>.

⁸⁹ Maaza C. Mekuria, Peter G. Furth, and Hilary Nixon. "Low-Stress Bicycling and Network Connectivity" Mineta Transportation Institute Publications (2012)

Figure 72. Comfort of Different Types of Bike Infrastructure

Figure 73: Examples of Bike Infrastructure in Charlestown

"As a daily biker in Charlestown ... my dream would be designated bike space that does not run along parked cars."

- Charlestown stakeholder

anticipated growth in residents and jobs west of Rutherford Avenue and around Sullivan Square. Further, existing and planned bike lanes and paths in neighboring communities including Somerville, Cambridge, and Everett will help magnify the impact of connections in Charlestown.

When it comes to creating streets that feel welcoming to bikers of all ages and abilities, not all bike lanes are created equal. The vast majority of people will not consider biking for transportation if streets require them to ride alongside vehicle traffic and parking without protection. Research consistently shows that separated bike lanes and slow, low-traffic streets are the most comfortable – and most useful – connections for the widest range of people (Figure 72).⁸⁹

The vast majority of Charlestown's bike network is made up of painted bike



Figure 72

lanes with short segments of separated bike lanes and shared-use paths around Sullivan Square and within the Navy Yard. Within the Original Peninsula, many streets are slow, low-traffic streets that help facilitate short neighborhood trips. However, the larger cross-neighborhood streets in Charlestown like Main, Bunker Hill, and Medford Streets all lack the infrastructure necessary to create a biking environment that supports most people. As a result, key community destinations – such as the grocery and local retail shops at the Bunker Hill Mall, the neighborhood's schools, and cherished parks – are not readily accessible by



Figure 73

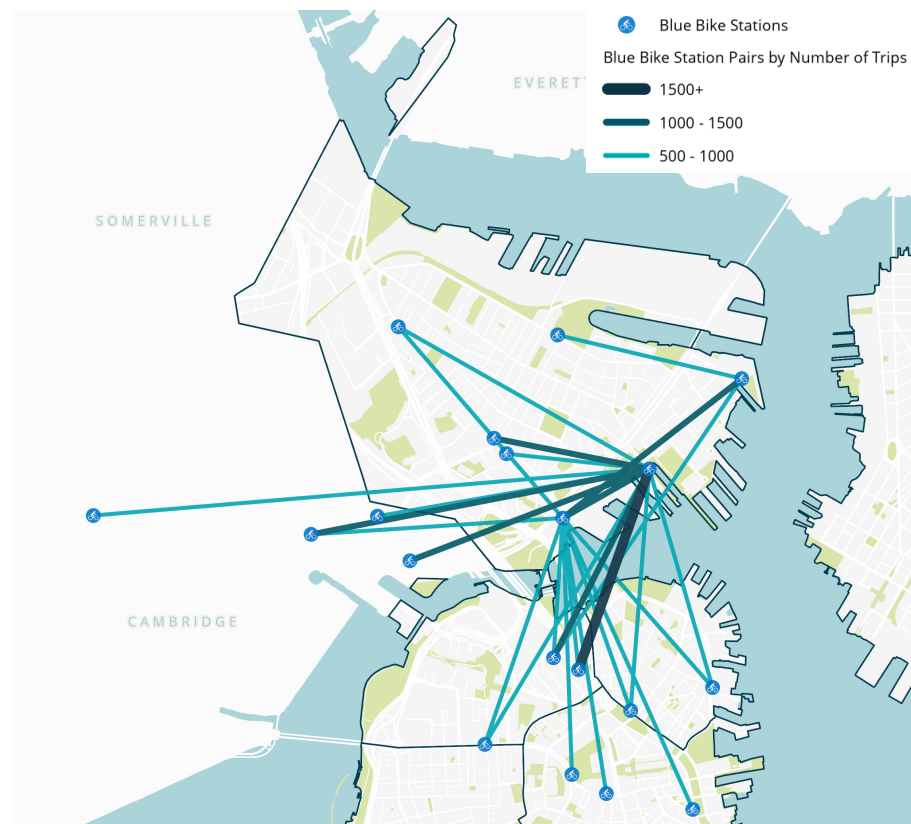


Figure 74

bike.

All of the existing on-street connections in and out of the neighborhood are currently high-stress. The distance between streets that bicyclists can use to travel in and out of Charlestown also significantly extends the distance a person must ride to reach destinations that appear quite close; with nearly a mile between the Cambridge Street Bridge and the Gilmore Bridge, bicyclists must go significantly out of their way to cross the MBTA railroads and I-93 to reach nearby destinations in Cambridge and Somerville.

In addition to navigating streets without protection from vehicle traffic, people biking in Charlestown are uniquely impacted by topography. From the lowest point in the neighborhood to the highest, there is a significant change in elevation over a short distance, resulting in many steep streets (figure 73). The existing painted bike lanes on Main Street notably follow one of the few flat routes that traverse the neighborhood. To help support existing and future riders in Charlestown, a better protected and connected bike network is needed.

Bikeshare

Last year, people took nearly 106,000 Bluebikes trips starting or ending in Charlestown. Bluebikes is the City of Boston's bike share program. This equates to nearly 300 trips per day in the neighborhood. Bluebikes trips to and from Charlestown come from all across the region. In fact, only 15% of Charlestown's Bluebikes trips both started and ended in Charlestown. Bluebikes trips to and from Downtown Boston, Back Bay, Seaport, Cambridge, Somerville, and Everett are all common. These ride patterns mirror the working locations of many Charlestown residents: Approximately 41% of Charlestown residents work in either Charlestown, Downtown Boston, the West End, or Cambridge.⁹⁰

⁹⁰ Commuter flows : Employment and Residence Patterns in Greater Boston, BPDA Research Division, August 2016

Figure 74. Bluebikes Station Pairs with 500+ Annual Trips that Start or End in Charlestown

Figure 75. Bluebikes Trips by Station, April 2022 - April 2023

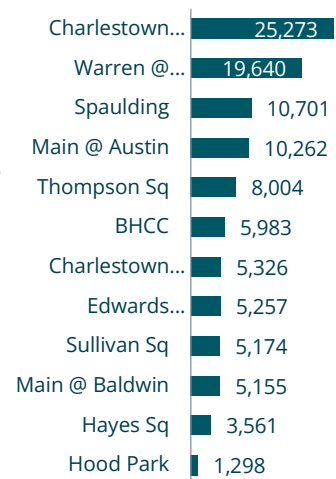


Figure 75

Over 50% of Charlestown's Bluebikes trips either started or ended at one of the Navy Yard's three existing stations. The high rate of trips between the Navy Yard and Downtown Boston suggest that Bluebikes may be a popular option for tourists. In addition, trips between the Original Peninsula and the Navy Yard were also quite frequent, suggesting that Bluebikes may be a popular way for people to get to and from the Navy seasonal ferry service that is co-located with the Navy Yard Bluebikes station. Within the rest of the neighborhood, the two stations closest to the Bunker Hill Mall were most frequently used.

⁹¹ Massachusetts Bay Transportation Authority, Massachusetts Department of Transportation, The MBTA Station Access Study - September 2020 § (2020).

Figure 76. Population and Ridership Characteristics of Transit Hubs Similar to Sullivan Square Station

Figure 77. How People Travel to Charlestown's Orange Line Stations

TRANSIT CONDITIONS

Sullivan Square is a significant regional transportation hub, but few people benefit from living close by. With the Orange Line and a dozen different bus routes serving Sullivan Square today, the station is among the busiest in the MBTA's regional system. Across the MBTA's 294 subway and commuter rail stations, Sullivan Square is in the top 10% of stations for average ridership.⁹¹ With the implementation of the MBTA's Bus Network Redesign, even more high-frequency bus routes will pass through Sullivan Square Station than today. However, the vast majority of space around Sullivan Square is dedicated to large roadways and industrial uses. Although the station is essential for regional connectivity and transfers across transit modes, relatively few people live within close proximity of Sullivan Square Station compared to other prominent, neighborhood-oriented transit hubs in Boston. In addition, while most other comparable stations are surrounded by more residents than riders, Sullivan Square Station is the opposite: ridership at the station is significantly higher than the population of people who live nearby. Sullivan Square station and the underutilized land surrounding it presents an excellent opportunity for transit-oriented development – especially for housing – to help relieve the existing housing shortage in a location that strongly supports travel by transit. Chapter 3 of this PLAN offers a framework for future development in this area.

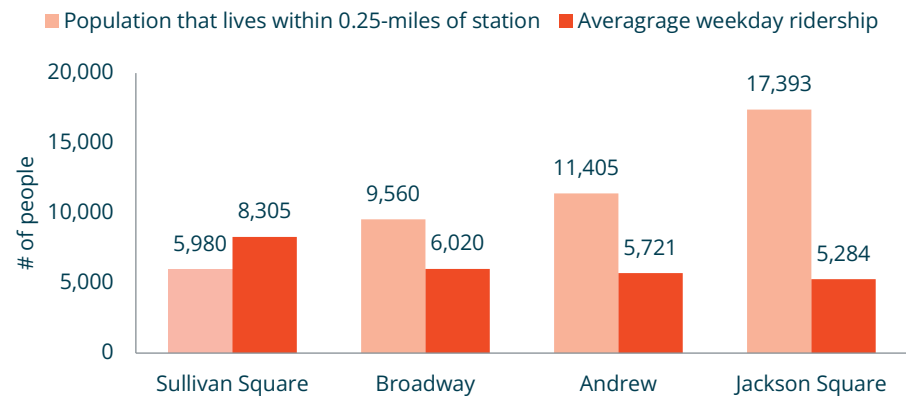


Figure 76

Traveling to and from the Orange Line

Walking is by far the most common way people reach the Orange Line. For both Sullivan Square and Community College stations, over 50% of riders arrive at the station by walking. While the share of people who walk to both stations is relatively similar, other travel characteristics are significantly differentiated between the two stations. Because relatively few people live within a short walk of the numerous transit connections at Sullivan Square station, driving is the second most common way people travel to the station. Though no dedicated MBTA parking is provided at Community College Station, one in four people reach the station by driving and parking nearby. In addition, many more people are dropped off at Community College Station than at Sullivan Square station.

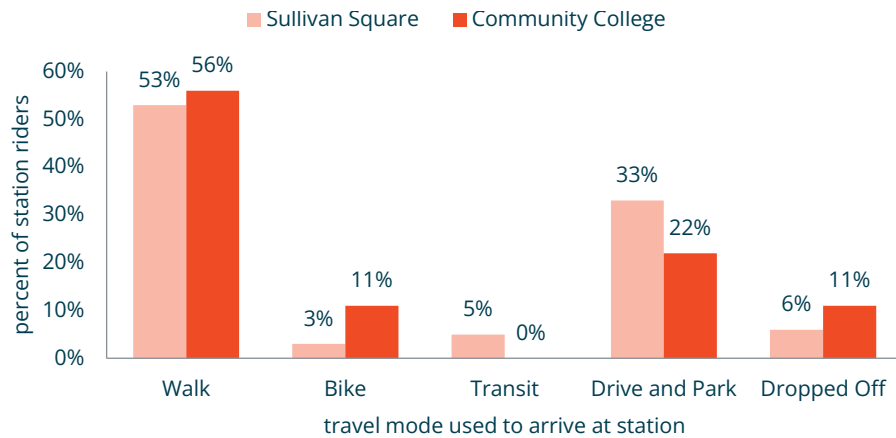


Figure 77

Because no bus routes serve Community College Station today, transit transfers are not possible. At Sullivan Square, however, five percent of people traveling to Sullivan Square transfer from the bus. Finally, over 10% of people who board the Orange Line at Community College arrive by bike – either their own personal bike, or via Bluebikes. Bike parking at both stations is extremely limited today and should be expanded.

Bus Network Connections

Outside of Sullivan Square, Charlestown's existing bus network is limited in both the available destinations and frequency of service. Though Sullivan Square is a major transit hub that provides bus and subway service to areas around the

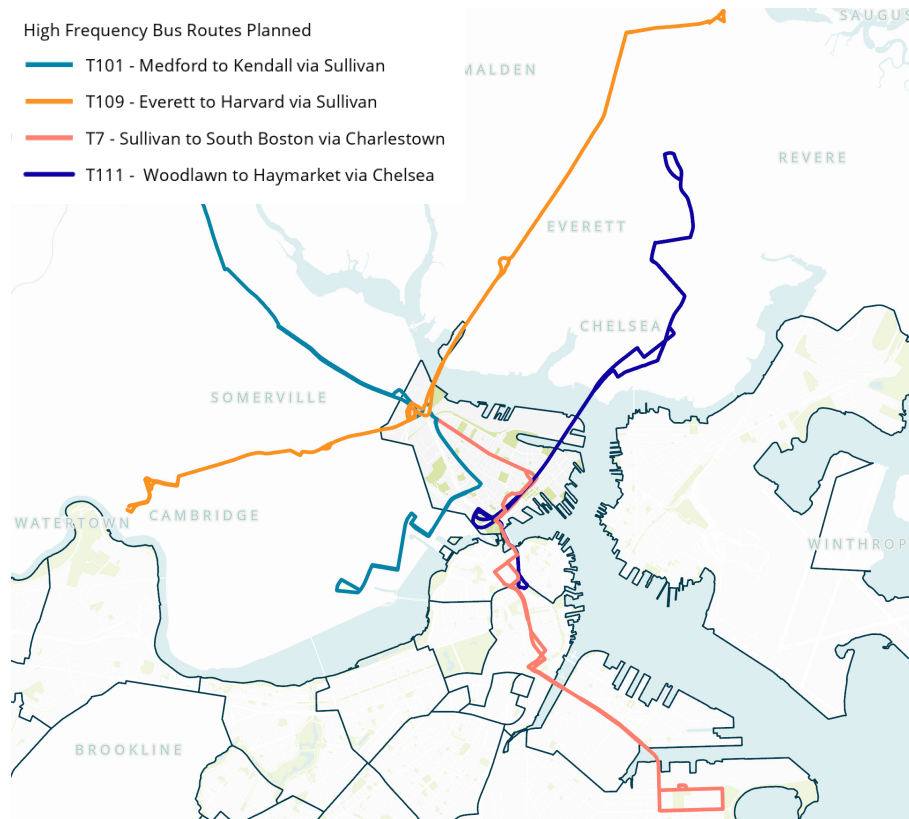


Figure 78. High-Frequency Bus Routes Planned for Charlestown

Figure 78



Figure 79

Figure 79. Average Weekday Boardings at Bus Stops in Charlestown, Fall 2022

region, the Original Peninsula is only served by two bus routes, both of which start at Sullivan Square Station and end Downtown. In addition, both of these routes provide relatively infrequent service, with buses arriving every 25 minutes at best. As a result, the existing bus routes provide limited utility and require at least one transfer to reach most destinations.

The MBTA's Bus Network Redesign will deliver more than twice as much bus service to the Original Peninsula than the existing system. As part of the MBTA's rollout of the new system, three of the nine planned bus routes for Charlestown will operate at high frequencies of every 8 to 15 minutes all day. Two of these routes – the T101 and T7 – will operate along Main Street and Bunker Hill Street, respectively. In addition to providing twice as much service as existing routes, these routes will open up new destinations for Charlestown residents; the T101



Figure 80

will provide Charlestown residents with a one-seat ride to Kendall Square and, critically, will create bus connections to Community College Station. The T7 will provide residents with a one-seat ride to South Boston via Downtown and the Seaport. Taken together, the significantly expanded frequency and wider range of destinations that will be served by these local Charlestown routes represent a new dawn for transit in Charlestown's Original Peninsula.

Even with these dramatic increases in the breadth and frequency of bus service, no service is proposed for Medford Street, the Navy Yard, or the areas west of Rutherford Avenue where future growth will be concentrated. In acknowledgment of these gaps, publicly-accessible shuttles are recommended to supplement bus service in Charlestown. These shuttles – called the Charlestown Links – are described more in Chapter 3 of this PLAN.

Bus Ridership and Reliability

Over 1,200 people board the bus every day at Sullivan Square; within the rest of the neighborhood existing bus ridership is highest in the area around the Bunker Hill Housing development.⁹² Of the 60 existing bus stops in Charlestown, 80% of stops have fewer than 10 daily riders on weekdays. However, the cluster of bus stops along Bunker Hill Street between Cook Street and Hayes Square serve up to 70 riders per stop on weekdays. Though many stops along Bunker Hill Street have relatively high ridership, basic amenities such as seats and shelters are not provided. To support existing bus riders and promote more bus trips with the implementation of the new bus network, high-ridership stations should be evaluated for the addition of amenities that contribute to a high-quality passenger experience.

The reliability and attractiveness of the bus is compromised by long and variable travel times along some streets in Charlestown. Today, all buses within Charlestown operate within general purpose lanes alongside private vehicles. As a result, bus passengers – many of whom may have waited a long time to catch the bus – are often delayed in traffic. Slow and/or inconsistent bus service makes it challenging and stressful for people to rely on transit. In Charlestown, bus passengers experience slow and inconsistent travel times at some of the primary gateways into the neighborhood including along Cambridge Street, the Alford Street Bridge, and the North Washington Street Bridge.

⁹² Massachusetts Bay Transportation Authority, Massachusetts Department of Transportation, The MBTA Station Access Study - September 2020 § (2020).

Figure 80. Typical bus stop conditions in Charlestown

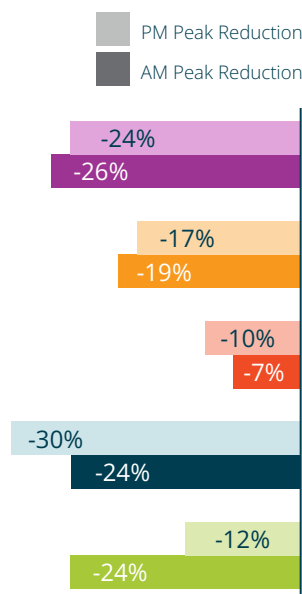


Figure 81

⁹³ Massachusetts Department of Transportation, State of the System Report: Ferry § (2015).

Figure 81. Reductions in Peak Hour Vehicle Traffic between 2016/17 and 2022 at Various Intersections

Figure 82. Vehicle Volumes on Main Street South of Sullivan Square, 2016-2022. All volumes represent two-day averages collected during September in each year.

Some of these streets carry significant bus traffic, transferring the delay experienced by a single bus to dozens of passengers on board. In particular, the areas around Sullivan Square and City Square carry over 10 buses during peak hours with a combined capacity for over 500 passengers. Several existing projects including the ongoing Washington Street Bridge reconstruction, the Cambridge Street Bridge Rehabilitation, and the Rutherford Avenue/Sullivan Square redesign all include bus priority – such as exclusive bus lanes – to help make bus service quicker and more reliable.

Charlestown Ferry

Charlestown also has access to a ferry route that connects the Navy Yard to Long Wharf in Downtown Boston. The existing ferry service operates every 15 to 30 minutes depending on the direction, time of day, and day of the week. Though recent data is not readily available, data from 2015 shows that the ferry is a well-used and reliable transit service for people traveling between Charlestown and Downtown Boston. In 2015, over 800 people used the Charlestown ferry each day.⁹³

DRIVING CONDITIONS

Charlestown's built and natural barriers create traffic pinch points in the neighborhood during peak hours. With only a few ways in and out of the neighborhood, local and regional vehicle traffic contributes to congestion on the streets that connect Charlestown to the rest of the region. During peak travel hours, some complex intersections around Charlestown's primary gateways experience significant congestion and result in delay for people driving, as well as those traveling in buses (figure 82). Virtually all of the intersections that experience significant delay today are included in ongoing projects that will reconfigure intersection geometry and operations.

Charlestown's vast network of one-way streets help prevent cut through traffic, but also contribute to circuitous driving and biking patterns within the neighborhood. The concentration of northbound-only streets is especially acute from Elm Street to Main Street between Bunker Hill Street and Medford Street; within this half-mile stretch, every single street is either northbound only or a dead end. With significantly fewer one-way streets southeast of Elm Street, virtually all southbound traffic in the area is pushed to the series of streets between Polk Street and Chelsea Streets, where the Bunker Hill

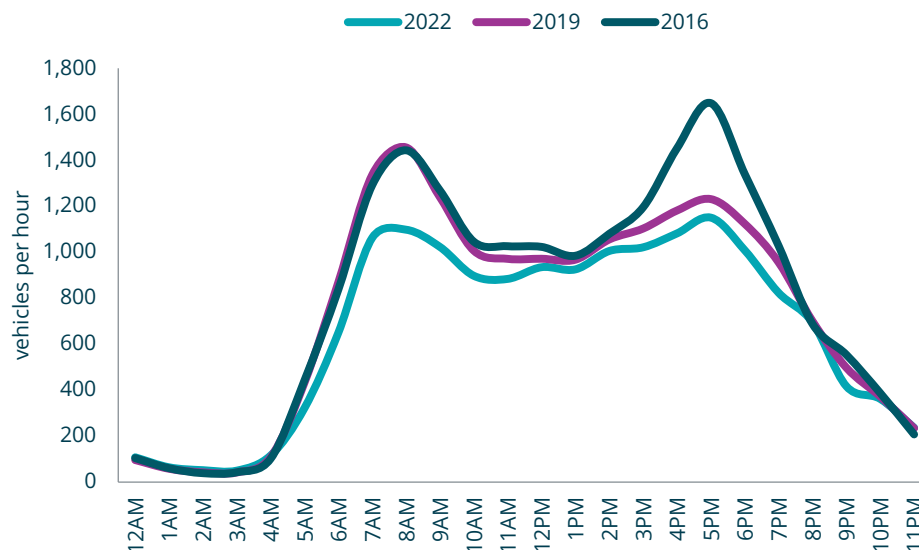


Figure 82



Figure 83

Housing Development is located. In addition to missing out on cut through prevention benefits that one-way streets provide, the existing configuration of streets increases health and traffic safety risks for some of Charlestown's most vulnerable residents, many of whom do not themselves drive. Future studies should examine one way patterns between Medford Street and Bunker Hill Street through both a transportation management and equity lens.

Traffic Trends

Overall vehicle volumes were trending downward before the pandemic and have continued to decrease. Counts taken at multiple locations between 2016 and 2022 show that traffic volumes are both lower and significantly less concentrated

Figure 83. 2019 Peak Period Intersection Operations. Traffic analysis completed using data from 2015, 2017, and 2019 and calibrated to 2019 conditions.



Figure 84

Figure 84. Curbside Regulations and Locations of Active Parking Permits

around peak hours than they were in 2016. Though the advent of lasting work-from-home arrangements as a result of the COVID-19 contributed to this trend, pre-pandemic data (2019) also showed a significant reduction in volumes compared to the mid 2010s, especially during the evening rush hour. Overall, traffic volumes at various locations have reduced by as much as 30% during some hours of the day and overall daily volumes have reduced by nearly 20% (figure 81).

CURBSIDE USES AND PARKING

Across the City, curb space is limited and has many competing needs. Curbs are the location for the interchange of many essential city functions: from trash pick-up, to bus stops, to loading, to short-term parking. In Charlestown, curbsides today are used primarily for on-street parking for personal vehicles. Parking in Charlestown is a source of stress for many neighborhood residents. However, the supply of parking available in Charlestown also contributes to

traffic congestion in the neighborhood. For this reason, all major developments in the City of Boston have a limited number of parking that may be provided on-site based on the project's proximity to transportation options, the type of uses proposed, and the size of the project.⁹⁴

Curbside regulations in Charlestown are dominated by residential permit parking, with concentrations of two-hour parking surrounding the Bunker Hill Mall and along Main Street. With small parcels throughout much of the Original Peninsula and relatively few driveways, roughly 40% of the neighborhood's street mileage is signed for resident-only parking for at least some portion of the day including large portions of the Original Peninsula and the Lost Village.⁹⁵ Outside of residential permit parking, portions of the Navy Yard are regulated by meters.

As of April 2023 there are over 7,700 active resident parking permits registered to over 5,000 distinct households in Charlestown. Put another way, roughly 55% of the neighborhood's existing households have an active residential parking permit. An estimated 45% of Charlestown households have no active parking permits, roughly double the percentage of households who don't have a car.⁹⁶ Of households that have an active resident parking permit, close to 40% maintain more than one permit even though only 23% of households in Charlestown have access to more than one car.

The distribution of resident parking permits across Charlestown is not even across households. Over 20% of the Charlestown's residential parking permits are held by just 6% of the neighborhood's households. Though the majority of households with a parking permit in Charlestown have one permit, nearly 2,000 households have two or more parking permits and over 500 households have three or more permits. The City of Boston does not currently place limits on the number of permits a household may have and all permits are available for free.

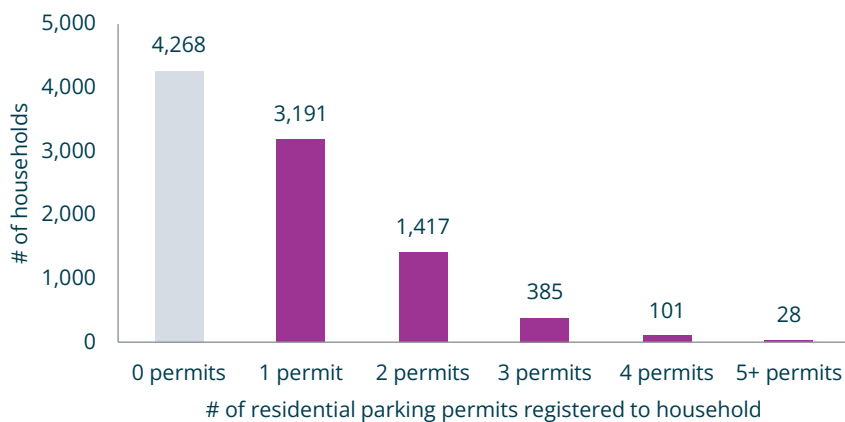


Figure 85

With growth on the horizon, parking policy is one of the City's most effective tools to manage vehicle demand on Charlestown's streets. Recognizing that Charlestown has limited capacity to absorb additional vehicle traffic, more restrictive parking ratios for all new development are recommended. With significant investments in transit and multimodal networks planned, a more restrictive supply of parking will also align the current policy with the transportation future that is anticipated in Charlestown. In addition to lower parking ratios, PLAN: Charlestown recommends establishing smaller residential permit parking zones that separate the Original Peninsula, Navy Yard, and Lost Village from the areas where growth is planned.

⁹⁴ Boston Transportation Department. "Maximum Parking Ratios." Boston.gov, Updated: February 23, 2022. <https://www.boston.gov/departments/transportation/maximum-parking-ratios>.

⁹⁵ Street mileage does not include highways, which cannot allow parking.

⁹⁶ U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Figure 85. Distribution of Residential Parking Permits in Charlestown

Electric Vehicles

With the proliferation of electric vehicles, space is needed for charging infrastructure. With a goal of becoming carbon neutral, Boston has begun implementing charging infrastructure to help meet a key goal: every household should be within a 10 minute walk of an EV charging station by 2030. Charlestown is already ahead of the curve, with multiple public charging stations scattered around the neighborhood. Virtually all of Charlestown is within a 10-minute walk of an existing, public electric vehicle charging station. Continued expansion of public EV charging will be important as Boston advances toward a future where all vehicles are fully electric.

Without adequate public charging infrastructure, individual charging infrastructure will create an inefficient system. In densely populated neighborhoods like Charlestown, the imperative to provide public charging stations is even greater to ensure residents without driveways have convenient options for charging their vehicle without introducing cords and tripping hazards into the pedestrian realm.

THE DEVELOPMENT PIPELINE

Understanding the unique transportation challenges that Charlestown faces, it is critical to note the significant investments that have been committed to the neighborhood through various governmental agencies. Currently, several projects and nearly half a billion dollars in funding have been secured for transportation improvements:

Project (Major Public Infrastructure Projects)	Project Status	Funding Status	Expected Completion	Total Funding Committed	Implementing Party
Lost Village Intersection Improvements	In Design	Construction Funded	2024	\$1,590,000	City of Boston
N Washington Street Bridge	Under Construction	Construction Funded	2025	\$177,000,000	MassDOT
Mystic/Maffa Bridge	In Design	Construction Funded	2026	\$65,000,000	MassDOT
Cambridge Street Bridge	In Design	Construction Funded	2027	\$16,600,000	MassDOT
Rutherford Avenue/Sullivan Square	In Design	Construction Funded	2030	\$198,000,000	City of Boston
Tobin Bridge Replacement	Planning Stage	Planning Study Funded	Unknown	TBD	MassDOT
Gilmore Bridge Replacement	Planning Stage	Planning Study Funded	2033	TBD	MassDOT
			Total	\$458,990,000	

In addition to these listed infrastructure projects, several upcoming development projects have also incorporated mitigation efforts to address transportation challenges. These projects include: 425 Medford Street, 40 Roland Street, 66 Cambridge Street, 201 Rutherford Avenue, Bunker Hill Housing Redevelopment, and One Mystic.

RECOMMENDATIONS

Based on a review of existing conditions and feedback from the Charlestown community, transportation recommendations to support existing and future residents, workers, and visitors of Charlestown were developed. As a 30-year PLAN, these recommendations reflect both long-term aspirations and possible near-term interventions. Through routine maintenance of City streets, new City-led capital projects, coordination with other state agencies, and partnership with the development community, a wide range of implementation mechanisms are available.

1. Leverage the many ongoing infrastructure and development projects to address Charlestown's safety, resilience, accessibility, and transit access needs. As projects move from planning to design and implementation, information gathered from community conversations and analysis developed through PLAN: Charlestown should be referenced and incorporated into projects.
2. Conduct deeper studies of key corridors in Charlestown including Main Street, Medford Street, Bunker Hill Street, Chelsea Street, and Austin Street and develop plans for future implementation. Corridor planning efforts should provide design and policy solutions to improve safety and accessibility, create stronger multimodal connections for people walking, biking, and taking transit, managing the curb, and addressing urban heat island through green infrastructure. Determine funding options for studies and implementation, which may include development mitigation, federal/state grants, or working through the City capital budgeting process.
3. Strengthen multimodal connections between the neighborhood and MBTA stations by:
 - Expanding bike parking at existing stations.
 - Evaluating high-use bus stops throughout the neighborhood for addition of shelters, real-time arrival info, benches, trash cans, etc.
 - Providing accessible neighborhood shuttle services that stop throughout the neighborhood and at both Orange Line stations. For full details of proposed shuttle routes, see Chapter 3.
 - Preserving transit service along the full length of Main St, even if the reconstruction of Rutherford Avenue becomes a high-frequency bus corridor.
 - Evaluating potential locations for new connections to Sullivan Square Station from the Lost Village.
 - Advocating for transit priority (bus lanes and signal priority) along Charlestown's gateways including around Sullivan Square, the Gilmore Bridge, and in both directions on the N. Washington Street bridge.
4. Establish a neighborhood bike network that connects riders of all ages and abilities to neighborhood destinations throughout Charlestown and to adjacent neighborhoods. Ensure all new development is accessible along streets that are comfortable for people biking. For full details of a preliminary neighborhood bike network, see Chapter 3.
5. Expand shared mobility options in Charlestown including public carshare to better support occasional drivers, public electric-vehicle charging stations to promote a zero-emission vehicle future, and bikeshare stations to facilitate quick trips within the neighborhood.
6. Study existing one-way street patterning between Medford Street and Bunker Hill Street, taking into consideration transportation equity and practicality for people biking and driving.
7. Evaluate skewed intersections (i.e. intersections that don't meet at right angles) throughout the neighborhood to identify potential safety, sustainability, and operational benefits. Key intersections that should be considered for reconfiguration include:

- Main street at Austin Street
 - Prescott Street at Harvard Street
 - Warren Street at Park Street and Henley Street
 - Common Street at Adams Street
 - Bunker Hill Street at Vine Street and Tufts Street
8. Emphasize walking, biking, and transit use as the standard for new development in Charlestown by:
- Targeting growth close to the Orange Line
 - Requiring strong transportation demand management (parking maximums, Bluebikes, public carshare, etc.) in all projects
 - Achieving the ambitious mode share of Go Boston 2030 requires aggressive transportation demand management (TDM) tactics. One of the most successful TDM strategies is restricting available parking. To help deliver new homes, jobs, and destinations in Charlestown without overburdening the street network, PLAN: Charlestown builds on the maximum parking ratios currently enforced by the Boston Transportation Department to reflect both the scale of growth anticipated, major planned investments in transit, and Charlestown's unique roadway constraints. The parking ratios proposed are:
 - Residential (Condo): 0.6/unit
 - Residential (rental): 0.4/unit
 - Retail >5,000 sf: 0.4/1,000 sf
 - Retail <5,000 sf: 0.2/1,000 sf
 - Hotel: 0.2/room
 - Office / Lab: 0.4/1,000 sf
 - Institutional: 0.4/1,000 sf
 - Industrial: 0.3/2,500 sf
 - Refining the details of a new high frequency bus service along Rutherford Avenue, in coordination with the Rutherford Avenue redesign
 - Establishing design standards for new streets
 - Studying the addition of a Sullivan Square Commuter Rail Station
 - Establishing smaller residential permit parking zones that separate the Original Peninsula, Navy Yard, and Lost Village from the areas where growth is planned

Neighborhood Services

EMERGENCY RESPONSE

Emergency response is covered in this PLAN within the 3 neighborhood services sections covering emergency medical services, fire, police, and emergency management.

Emergency Medical Services (EMS)

Existing EMS Services

Boston's Emergency Medical Service (EMS) is the designated primary ambulance service provider for the City of Boston, and the largest municipal EMS in New England, staffed by full-time emergency medical technicians, paramedics, supervisors, and command personnel. Charlestown has one EMS station (figure 86), located at 516 Main Street, which was built in 1990 during the Big Dig, in response to residents' fear that the large infrastructure project would cut Charlestown off from the rest of the city.⁹⁷ The EMS station has one ambulance bay, with services running 24 hours a day. Charlestown residents are also served by the Downtown EMS station.

In 2021, Charlestown accounted for 3.03% of Boston's total population, but only 1.86% of the total EMS incidents in the city.⁹⁸ ⁹⁹ A key consideration of where service is needed is not just where residents live, but also where they work. Although the resident population of Boston was 672,814 in 2021, the day-time population that EMS was serving was nearly double that, at 1.2 million, because of the commuter, student, and tourists populations that also come into the City.

EMS - Today's Needs

Boston EMS acknowledges the need for an additional ambulance in Charlestown today. There is no hospital emergency room in Charlestown, and so ambulances must travel to MGH, Tufts Medical, or the Longwood area when they have patients, which increases the turn-around time, or 'cycle-time' between calls that paramedics and ambulances are able to respond to, because they have further to drive. Additionally, events like concerts or athletic games at TD Garden can create congestion which increases cycle-time.

The City is committed to adding a second ambulance and ambulance bay in Charlestown. In partnership with Boston EMS, a Request for Proposals (RFP) was released by the BPDA for the EMS Substation Disposition Planning, which proposed the assemblage of the adjacent land to create a mixed use development along with the EMS substation. The project's previous iteration is no longer viable, but the BPDA is committed to exploring alternatives to locate an EMS substation at this site.

Separate from this work, Boston's Public Facilities Department (PFD) is performing a city-wide "EMS Neighborhood Study" to assess facility needs for EMS in every neighborhood. This study already acknowledges that another ambulance should be added in Charlestown through the EMS Substation Disposition process.

EMS - Projected Future Needs

Charlestown may need a third ambulance or a second EMS station if the neighborhood were to meet the maximum possible population growth projected by this PLAN (maximum 80% population growth by 2050. Refer to the

⁹⁷ City of Boston. "Emergency Medical Services." Boston.gov. Accessed July 17, 2023. <https://www.boston.gov/departments/emergency-medical-services#reports>.

⁹⁸ Boston Emergency Medical Services, and Boston Public Health Commission, Boston Emergency Medical Services: 2021 Vital Statistics § (2022).

⁹⁹ U.S. Census Bureau; American Community Survey, American Community Survey 2016-2020 5-Year Estimates

demographics section of the Needs Analysis chapter for more information about the population projection). Ideal locations would either be in the southern part of the neighborhood, closer to the Navy Yard, or west of Rutherford Avenue in the area projected to contain the most development. Due to the long-range nature of this PLAN and Charlestown's possible population growth, it is not necessary to build a new EMS station today, but call volume should be monitored over time. EMS produces annual vital statistics reports, publicly available on their website, which would alert EMS to changes in demand in the neighborhood.¹⁰⁰

¹⁰⁰ City of Boston. "Emergency Medical Services." Boston. gov. Accessed July 17, 2023. <https://www.boston.gov/departments/emergency-medical-services#reports>.

Figure 86. Existing Ambulance in Charlestown on Mishawum Street

Emergency Medical Service Recommendations

1. The BPDA and EMS should work together to add a second ambulance bay on publicly owned land in Charlestown. This may be achieved through future disposition of the EMS Substation at 516 Main Street or other BPDA-owned land in which future redevelopment would include the provision of a second ambulance bay.
2. Boston EMS should annually evaluate the call volumes in Charlestown, to assess if a second EMS station is warranted in the neighborhood.



Figure 86

Fire Operation Services

Existing Fire Operation Services

The Boston Fire Department (BFD) is the City's fire operation service, responding to "emergencies including fires, vehicle accidents, hazardous materials incidents, technical rescues, medical assistance and large scale events held in the city."¹⁰¹ Boston's fire department is the biggest in the state, and is the technical rescue department for the region, receiving rescue calls from nearby municipalities in addition to calls from within Boston. Unlike other first response services, like EMS and police, fire operations are often cooperative across municipal boundaries. For example, Boston has mutual agreements with both the Somerville and Everett fire departments to provide aid if needed.

In total, Boston has 33 fire stations, 22 ladder companies, and two tower ladders. The city is divided into two divisions by Massachusetts Avenue, with Charlestown included in Division 1. Within Division 1, Charlestown is located in District 3, which also includes the North End, West End, and Beacon Hill. In total, there are 4 fire stations and 1 Marine Unit within District 3. Charlestown alone has two fire stations, the Engine 50 Fire Station located at 34 Winthrop Street, and the Engine 32/Ladder 9 Fire Station located at 525 Main Street (figure 87). When additional support is needed, it typically comes from the Downtown or North End fire stations, and must cross the North Washington Street Bridge.

¹⁰¹ City of Boston. "Fire Operations." Boston.gov. Accessed July 17, 2023. <https://www.boston.gov/departments/fire-operations>.

Figure 87. Charlestown Fire Stations



Figure 87

Fire Operation Services - Today's Needs

Median response time is an important indicator of level of service. The median response time for fire in both Charlestown and citywide is 4 minutes, which is the shortest response time of any emergency department in Boston. BFD reports being well staffed, with no shortage of applicants for open positions.

Another major consideration is that construction can be dangerous. Charlestown is expected to have a consistent construction over the next decade, as the Bunker Hill Housing Redevelopment and other developments are built. The Charlestown fire companies are not trained for Tech Rescue, which is the operation most likely to be needed on a construction site. It is a priority that the Charlestown fire companies become trained in the near future. Additionally, over half of the boundary of the Charlestown neighborhood is water-facing, including the Mystic River, Little Mystic Channel and the Boston Inner Harbor. These are busy, vital waterways that will see a rise in incidents concurrent with any increases in building development and population.

Fire Operation Services - Future Needs

As Charlestown grows, there are two key resources the fire department may need in the neighborhood. The first is a District Chief located within the neighborhood. Presently, Charlestown is part of District 3, and the District Chief is located in Beacon Hill, which means in an emergency, they need to cross the North Washington Bridge. The second resource that might be needed is a new fire station. Today, Charlestown cannot provide a full first-alarm response (3 engine companies and 2 ladder companies) from within its own borders, which as the neighborhood grows may become necessary. Emergency responses must be supplemented by apparatus from adjacent neighborhoods. At this time, it is thought that if a new fire station were to be added, it should either be along Medford Street to serve the eastern part of the neighborhood, or west of Rutherford Ave, to serve the developing area around Hood Park. Call volume and median response time data will be important indicators of if and when these might be needed in the future.

Fire Operation Services Recommendations

1. Charlestown's fire companies should be trained in Tech Rescue.
2. Call volume trends should be monitored over the next two to three decades in Charlestown to determine if and when Charlestown might need its own District Chief or when an additional fire station might be necessary.
 - An additional fire station, staffed with a ladder truck and an engine, will provide a full first-alarm response from within the boundaries of Charlestown.
3. The addition of a dedicated marine asset should be studied as Charlestown's waterfront continues to develop.

Police Services

Existing Police Services

The Boston Police Department (BPD) is the City's police force, with a 'community policing' mission, described as "partnership with the community to fight crime, reduce fear and improve the quality of life in our neighborhoods."¹⁰² Charlestown falls within Boston's A-1 police district, which also includes Downtown. In addition to being a part of the A-1 district, Charlestown also has its own, smaller neighborhood specific district called A-15. No other neighborhood in the city has a district within a larger district in this way.

The A-1 district facility is the main facility, while the A-15 facility is a satellite facility which assists with rapid response services in Charlestown. Before the existing A-15 station was constructed in 2008, the Charlestown station was a trailer. Today, the A-15 station is a 17,000 sq/ft, \$8.5 million facility, which includes booking and holding areas, community meeting rooms, training rooms, offices, locker and shower facilities, armory zones, fuel depots and vehicular parking areas (figure 88). The A-15 station has a drug and fugitive unit presence, and takes lots of walk-ins. An important function of how the A-1 and A-15 stations operate is that staffing is fungible - officers from the A-1 Downtown station are often sent to Charlestown if the A-15 station staff are occupied or require assistance. BPD has a flexible response plan with a computer aided dispatch system. Typically, Charlestown officers respond first, and Downtown officers respond second, acknowledging that officers from Downtown must go over the North Washington Bridge, which has an impact on response times.



Figure 88

¹⁰² Boston Police Department. "Mission Statement." bpdnews.com. Accessed July 17, 2023. <https://bpdnews.com/mission-and-objectives>.

Figure 88. Charlestown A-15 Station on Vine Street

Below is a short list of some BPD citywide programs and partnerships the city is running to promote safety and health:

- *The Boston Emergency Services Team (BEST) - Master's Level mental health clinicians co-respond with BPD officers, improving response to mental health-related calls for service.*
- *Street Outreach Unit (SOU) - Formed in 2008, the SOU helps those affected by mental illness, substance use disorder, and homelessness.*
- *Boston Neighborhood Trauma Team - A 24/7 call line (617-431-0125), the community violence trauma support line is free, confidential, and always open. Any resident or worker in Boston can call when they are exposed to trauma due to community violence, or years later, there is no time limit. Live, trained professionals work to answer calls.*
- *YouthConnect - A partnership between the Boston Police Department (BPD) and Boys & Girls Clubs of Boston places Master's-level licensed clinical social workers in police stations and specialized units with front-line officers. YouthConnect operates independently from the BPD and maintains its own confidential client database.*

Police Services - Today's Needs and Ongoing Work

Over the past year, BPD has been working on various policing reforms focused on building trust with the community, sharing data, changing policies, and improving policing. The work has included threat assessments to the LGBTQ community and health centers, a focus on diversity in hiring at BPD, harm prevention and de-escalation training, the publishing of new performance data, and new surveillance use policies, among many other reforms. For more information, please refer to Police Commissioner Michael Cox's BPD Update on Police Reform released in February of 2023.¹⁰³

Today's median response time for priority 1 calls citywide is 6 minutes, while the median for Charlestown is 7 minutes. While not a large difference, it does show that there is room for improved service in Charlestown.

In considering Charlestown's needs today, it is important to understand how the demand for police services varies across the city. Demand for police services can be measured in call volume - especially 'Priority 1' calls, which are emergency calls which require an immediate response. Of all of the districts in Boston, Charlestown consistently has the fewest calls (figure 89). While that does not mean that the neighborhood does not have needs today, it does help to show how it compares to other, potentially higher need areas. Interestingly, Charlestown's call volume has also consistently been going down since 2015, even as the neighborhood's population has been increasing. In 2015, ACS data puts Charlestown's population at just over 18,000 residents, and there were 13,150 calls.¹⁰⁴ In 2021, Charlestown's population was 20,411 according to ACD data, nearly a 2,500 resident increase, while call volume dropped to 10,552, over a 2,500 call decrease. The COVID-19 pandemic did impact call volume citywide, but while some neighborhoods saw a plateauing of call volume between 2021 and 2022, Charlestown saw call volume continue to drop another 1,521 calls, down to 9,021, even as the population has continued to increase. As new residents move to Charlestown in the coming decades, call volume, not just population count, will be an important way to monitor if additional resources are needed.

¹⁰³ Boston Police Department. "Update on Police Reform." Accessed July 17, 2023. <https://www.boston.gov/news/boston-police-department-update-police-reform-0>

¹⁰⁴ U.S. Census Bureau; American Community Survey, American Community Survey 2016-2020 5-Year Estimates and Boston Police Call Volume Data, 2015-2022

Figure 89. Call Volume by Police District

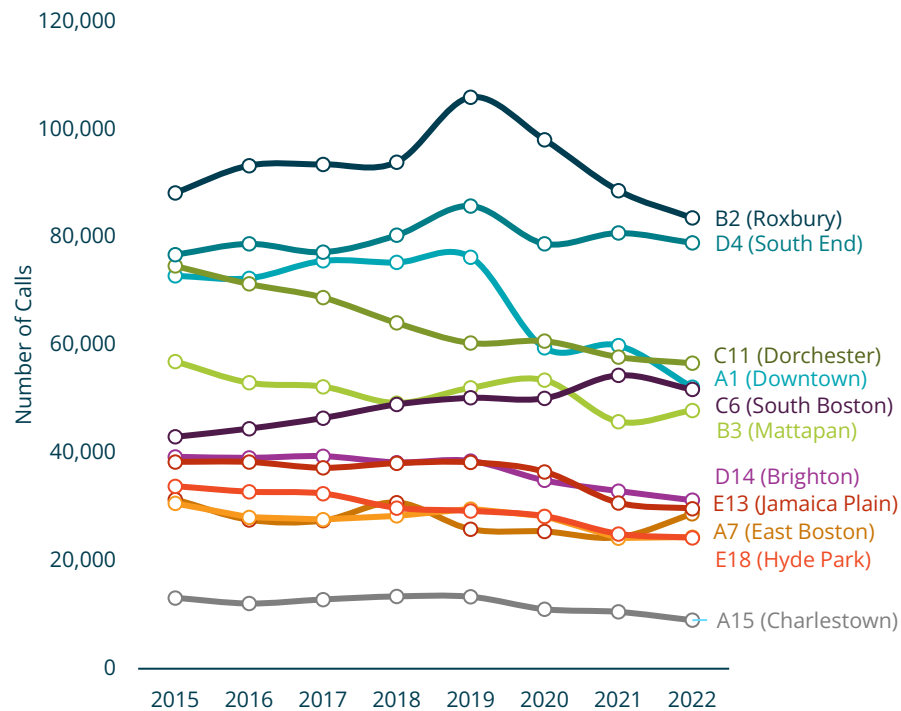


Figure 89

Police Services - Future Needs

A goal of good policing is to be proactive, not reactive. Funding for police programs should be designated when projects are permitted, not when construction is complete, in order to be proactive.

Call volume, a primary way demand for police services is measured, is very dynamic across time of day, day of week, and geography. When considering the demand future development in Charlestown might place on the police, the two factors which have the highest impact on call volume are the populations served and the land uses of an area. Uses such as bars and nightclubs may cause higher call volume, as do high schools and college campuses. The land uses that developments propose should be monitored and communicated to BPD when projects are permitted and move towards construction, so resource allocation of police can be considered.

The A-15 station's status as a satellite station means that it is only open normal business hours, M-F, 8am-5pm. Outside of those hours, the first response in the neighborhood comes from the A-1 station. If Charlestown's population were to increase by the 80% maximum projected by this PLAN, the A-15 station would need to become a fully staffed and operational facility (refer to the demographics section for more information on population projections). Several technology and staffing capacity upgrades would be needed to make that feasible, while some existing support functions may need to be moved. In preparation for development in Charlestown, but ahead of any improvements to the A-15 station, adding an additional officer to the A-1 station would provide additional coverage for Charlestown.

Police jurisdiction is also an important consideration for new developments. As the industrial parts of Charlestown are potentially redeveloped, BPD should be the primary contact for police calls, even for large private campuses, like Hood Park. For streets in private developments, BPD can only enforce accessible parking and fire lanes. Other parking signage on private property is not enforceable by BPD, unless the streets are transferred to the City to be public streets.

Police Services Recommendations

1. BPD and the Boston Public Facilities Department should perform a facilities and staffing study of the Charlestown A-15 police station to determine what upgrades would be needed to make the A-15 station a fully operational facility. A focus should be on clinicians and youth services, and consider other assets, such as rapid response vehicles.
2. Until the A-15 station is upgraded and staffing is increased, one additional officer should be added to the A-1 station, to help serve Charlestown calls.
3. Funding for police programs should be designated when projects are permitted, not when construction is complete, in order to be proactive.
4. In partnership with the Boston Public Health Commission (BPHC), BPD should identify and support drug addiction recovery programs, youth services, and other community programs are key to crime prevention and building healthy communities. Identify and support these services through funding and other means. Charlestown Coalition is crucial for the youth services and drug/addiction recovery programs it offers. Harvest on Vine is crucial for its food distribution work.

Emergency Management

Existing Emergency Management

The Office of Emergency Management (OEM) is the city department which handles “emergency management, emergency preparedness, and homeland security planning for the City of Boston.”¹⁰⁵ Their mission is to “enhance the City’s capacity to prevent, protect against, respond to, and recover from major emergencies.” Much of OEM’s work involves preparation for major city events, like the Boston Marathon, as well as responding to man-made or natural emergencies as they arise, such as assisting residents displaced by a fire. OEM manages the Boston Emergency Operations Center, which facilitates planning and aid in the aftermath of a disaster. The department works closely with the Boston Police Department (BPD), Emergency Medical Services (EMS), and the Boston Fire Department (BFD).

¹⁰⁵ City of Boston. “Emergency Management.” Boston.gov. Accessed July 17, 2023. <https://www.boston.gov/departments/emergency-management#about>.

¹⁰⁶ Boston Office of Emergency Management. “Emergency Shelters.” ESRI. Accessed July 17, 2023.

Emergency Management - Future Needs

When areas of the city grow, OEM has three key concerns: 1) shelter space capacity; 2) egress routes ; and 3) emergency response. Citywide, there are 54 emergency shelter sites designated, all of which are owned by public entities.¹⁰⁶ In Charlestown, there are four city facilities with this emergency shelters designation: the Harvard-Kent Elementary School, Charlestown High School, the BCYF Charlestown Community Center, and the Bunker Hill Community College. In the future, if additional shelter capacity were needed within the neighborhood, the Edwards School (currently under renovation) and the Warren-Prescott School could both be studied for suitability as shelters with BPS and the Red Cross.

For egress routes, Charlestown has clearly defined evacuation routes, which include Rutherford Avenue, Medford Street, and Chelsea Street, among other major roadways. When considering how a large volume of people would leave the neighborhood in the case of an emergency, OEM considers not just how people may drive to leave, but also how to provide egress routes to those without personal vehicles. As of 2021, about 18.7% of households in Charlestown did not own a vehicle. OEM regularly reviews its emergency response plans for the City, as populations and needs constantly change. As Charlestown continues to grow over the next 30 years, OEM will consider not only the number of residents, but also how those residents travel and what their needs are, based on age, disability, and other factors.

Emergency response is covered in this PLAN within the 3 neighborhood services sections covering police, EMS, and fire. Please refer to those sections for more information.

Emergency Management Recommendations

1. If additional emergency shelter capacity is required over time, study the designation potential of the Edwards School and the Warren-Prescott School.
2. OEM will continue to evaluate egress and emergency response plans for Charlestown overtime as the population continues to grow and change.
3. The work of other Boston city departments, such as the Boston Transportation Department (BTD), Boston Environment Department, etc, should continue to be coordinated with OEM to consider how projects impact overall emergency response.

COMMUNITY CENTERS

Existing Community Centers

The Boston Centers for Youth and Families (BCYF) is the City department which runs Boston's 35 community centers. Charlestown has three BCYF run facilities: the BCYF Charlestown Community Center on Medford Street, the BCYF Golden Age Senior Center on Main Street, and the Clougherty Pool, located in Doherty Playground. These three facilities serve different populations and purposes.

The BCYF Charlestown Community Center includes a community room, a gymnasium, a fitness center, and an indoor pool, largely serving families, teens, and children through programming like art classes, after school programs, and swim classes. The BCYF Golden Age Senior Center is co-located with the Mishawum community, and includes a multipurpose room, and provides programs and events for seniors, ranging from bingo, yoga, and book clubs, to social services, a lunch program, and home repair assistance. The Clougherty Pool is an outdoor pool facility, with two pools and a 2-story bath house, serving every age group, which is currently undergoing a renovation project expected to be completed in two phases, ending 2024 and 2025.

In addition to these city run community centers, Charlestown also has several non-profit run community centers such as the Charlestown Boys and Girls Club on Green Street, and the Charlestown Branch of the YMCA on 3rd Avenue in the Charlestown Navy Yard.

Figure 90. Existing BCYF Facility in Charlestown on Medford Street



Figure 90

Charlestown Community Centers - Today's Needs and Projects

Two of Charlestown's three BCYF facilities are being considered for, or have active improvement projects. The Clougherty Pool closed due to facility and life safety concerns, and with the support of community advocates, is currently in a design and construction process for two new pools. With construction of two new pools expected to be completed in 2024, and a renovated bath house expected to be completed in 2025,¹⁰⁷ ¹⁰⁸ the improved Clougherty Pool will provide the anticipated return of an important and necessary neighborhood asset and gathering space. One of the new pools is intended to be a 6-lane lap pool, while the other will be a multi-use family pool with zero-depth entry. The project is being phased to ensure the two new pools are open for summer of 2024. The total project cost is estimated at \$30 million.

¹⁰⁷ Boston City Council Committee on Government Accountability, Transparency, and Accessibility - Hearing on Docket #1034, October 13, 2022, Request for Information § (2022).

¹⁰⁸ Public Facilities, and Kerrie Griffin, Subject: Draft Schedule Narrative - Clougherty Pool, November 29, 2022 § (2022).

The second ongoing project is the BCYF Charlestown Community Center Study, which considers how to replace the existing facility with a new community center. The final study is expected to be released in June of 2023, and the next step would be for the city to allocate funds to the design of a new facility based on the recommendations of the completed study.

In addition to the Clougherty Pool capital project and the BCYF Community Center Study, BCYF, in partnership with Boston's Public Facilities Department (PFD) is launching a citywide facilities assessment, which will include the three Charlestown centers, and identify facilities which need improvements.

Charlestown Community Centers - Future Needs

Youths and seniors are the two age groups who use BCYF community facilities the most. BCYF is placing emphasis on the addition of multi-purpose rooms, which are flexible and can meet the needs of multiple populations. As Charlestown grows, the completion of the new BCYF Charlestown Community Center is intended to provide any need for additional capacity that may arise over the next 30 years.

The largest need that BCYF expects is for additional funding for senior programs, especially if any housing for seniors is added to Charlestown in the future. BCYF is also reevaluating its need for computer labs, moving towards more mobile technology and maker spaces, which a citywide BCYF technology needs assessment would help to further evaluate.

Community Centers Recommendations

1. New developments proposing community space should begin coordination with BCYF early in the development review process.
2. BCYF community facilities in Charlestown should prioritize the addition and retention of multipurpose spaces to maintain flexibility as Charlestown's population grows and changes.
3. More funding in Charlestown should be allocated towards senior programming, especially if any new senior housing is added in the neighborhood.
4. BCYF should undertake a citywide technology needs assessment.
5. The BCYF facilities assessment should consider both the current population of Charlestown and the possible future population of the neighborhood.

PUBLIC LIBRARY

Existing Public Library Services

The Boston Public Library (BPL) is a department of the City of Boston, and runs a central library and 25 neighborhood library branches. Founded in 1848, “it was the first large free municipal library in the United States, the first public library to lend books, the first to have a branch library, and the first to have a children’s room.”¹⁰⁹ Charlestown has its own branch of the public library, located at 179 Main Street (figure 91), and, like all the neighborhood branches, operates as a civic hub, offering WiFi, computer access, printing, reservable community spaces, citizenship information, collections of books and other media, and a broad range of programs and services.

Charlestown’s public library started off within the Warren Savings Bank, opening in 1862 with 6,000 volumes. It has since moved three times: in 1869 to Charlestown’s City Square City Hall, in 1913 to the corner of Monument Square and Monument Avenue, and in 1970 it moved to its current location.¹¹⁰

Boston Public Library Charlestown Branch - Today’s Needs and Projects

In 2013, BPL conducted its most recent major facilities review of all its branch libraries, looking at key factors such as user-friendliness, quality of community gathering space, quality of special collections, availability of knowledge resources, accessibility to technology, and quality of resources for children and teens. The Charlestown branch was one of 13 branch libraries which scored as “Meets Most or All” of the evaluation criteria, which indicated that it needed either only minor improvements or no improvements. The same study identified 6 other neighborhood branch libraries which likely required capital projects,

¹⁰⁹ Boston Public Library. “About the BPL.” Boston Public Library. Accessed July 17, 2023. <https://www.bpl.org/about-the-bpl/>.

¹¹⁰ Boston Public Library. “About the Charlestown Branch.” Boston Public Library. Accessed July 17, 2023. <https://www.bpl.org/about-charlestown/>.

Figure 91. Existing Public Library on Main Street



Figure 91

several of which have been upgraded since the study was released. The facilities study identified several opportunities for improvement of the Charlestown branch library, including a recommendation for “a comprehensive, professional signage package is needed for the exterior and interior of the branch” which the library would still benefit from today.¹¹¹

¹¹¹ Branch Facilities Review. Boston Public Libraries. 2013.

When determining what a branch library needs, it is important to consider not just how many people are visiting the library, but how they are using it. In 2022, Charlestown had the third highest volume of visitors of any branch in the BPL system. However, it ranked 8th in terms of circulation, 17th in computer usage, and 20th in WiFi usage. With about 37,000 volumes, 24 public computers, and free WiFi, the library seems to mostly be meeting the needs of today's Charlestown residents.

BPL has two additional projects which may impact library services in Charlestown. The first is that in the coming year, the BPL Board of Trustees intends to begin a Strategic Planning process, to evaluate the BPL's needs across the City. The second is the implementation of the McKim Master Plan, which recommended the restoration and renovation of portions of the Central Library's McKim Building in Copley Square, and has the potential to impact Charlestown residents due to its nature as the central library for the entire city. Residents may of course use any branch of the library or its online services.

Boston Public Library Charlestown Branch - Future Needs

Although the PLAN projects that there might be up to an 80% increase in the neighborhood's population by 2050, not all populations are frequent public library users today. For this reason, it is difficult to predict how many additional or different resources the Charlestown BPL branch might need over the next 30 years. Instead of assessing that need now, BPL should reassess Charlestown's need at regular intervals, in alignment with the city's capital budgeting process.

When branch libraries are improved, they typically receive one of three levels of treatment: 1) a light refresh; 2) a renovation or addition; or 3) a rebuild in place. It can be very difficult to find an available parcel to build a new, often larger, branch library, which has additional staffing implications. If a neighborhood's needs go beyond what is achievable through an addition or renovation, then demolition and rebuilding is often the best option. In consideration of this PLAN's sustainability and preservation goals, renovation and additions are preferable to demolition.

Public Library Recommendations

1. The coming strategic plan for BPL should consider future expected growth and population projections, in addition to its current needs.
2. The needs of the Charlestown Branch Library should be reevaluated at regular intervals as development in the neighborhood occurs. This PLAN recommends 5 year-intervals, aligned with updates to the City's 5-year Capital Budget.

¹¹² Communications Office, and Boston Public Schools, Boston Public Schools at a Glance 2019-2020 § (2019).

Figure 92. Existing Public Schools Serving Charlestown

PUBLIC SCHOOLS

Existing Public Schools

Boston Public Schools (BPS) has 125 public schools across Boston, serving grades K0 to 12, and including 3 exam schools, 6 special education schools, 6 Horace Mann charter schools, and 5 Innovation Schools, and 20 pilot schools. BPS is also rapidly expanding its universal pre-K (UPK) program for children ages 3 and 4, in school-based settings, community-based settings, and starting in School Year 2023-24, family child care settings. In October 2022, BPS had an enrollment of 48,777 students, which is roughly 70% of the total school aged population in Boston.¹¹²

Charlestown is home to about 3.8% of Boston's under 18 population, and currently has 3 BPS schools in the neighborhood. In October 2022:

- The Warren-Prescott K-8 served 526 students in grades K0-8,
- The Harvard-Kent Elementary served 349 students in grades K0-6
- Charlestown High School served 794 students in grades 7-12

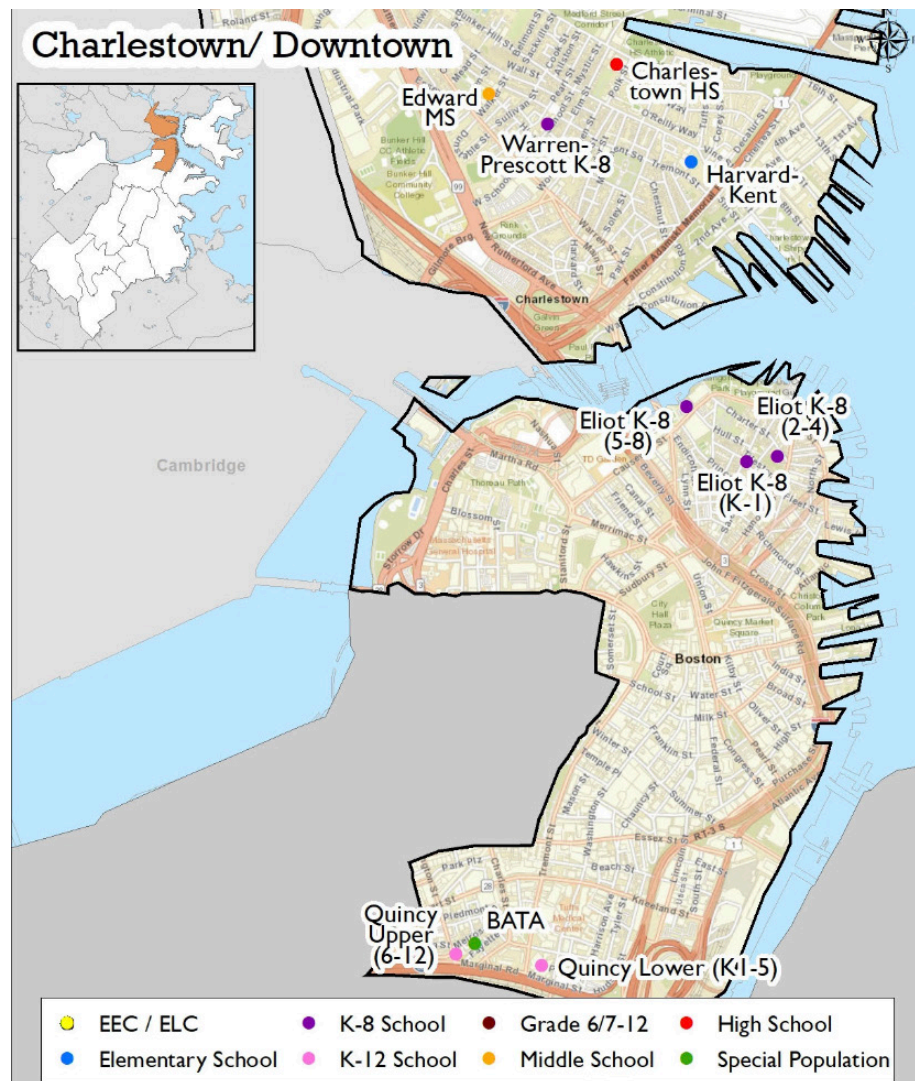


Figure 92

Additionally, the former Edwards Middle School building is currently under renovation, and will be reconfigured to serve the Horace Mann School for the Deaf and Hard of Hearing community, with an expected completion of Fall 2024. When open, the Edwards building will also house six early childhood classrooms as part of the Warren-Prescott community.

Charlestown is part of BPS Region 1, which also includes schools in East Boston and the North End, including the Eliot K-8 School. All Region 1 BPS schools are supported by a regional School Superintendent and Operational Leader.

Public Schools - Needs Today

The average age of BPS buildings in Charlestown is 62 years, and facilities are in need of significant investment to meet today's standards for instruction and building conditions. The BPS Facilities Department is currently undertaking a Facilities Conditions Assessment to assess the needs of school buildings across the city. Additionally, the City of Boston Public Facilities Department (PFD) and BPS are leading a PreK-6 & 7-12 School Design Study, which will define educational specifications and building standards in order to accelerate future construction and renovation projects. The School Design Study also includes a building-by-building capacity analysis to better understand the potential to reconfigure existing spaces to allow for a growing population and better support the District's educational priorities. Both studies will be complete by the end of 2023 and incorporated into the District's long-term facilities plan. All of this work is part of the Green New Deal for Boston Public Schools, acting on the City and residents' "shared commitment to expanding access to safe, healthy, resilient, and inspiring learning spaces, with state-of-the-art classrooms, cafeterias, auditoriums, and athletic, outdoor, meeting, and support spaces."¹¹³

¹¹³ City of Boston. "A Green New Deal for Boston Public Schools." Boston.gov, Updated: June 6, 2023. <https://www.boston.gov/education/green-new-deal-boston-public-schools>.

¹¹⁴ Boston Schools Fund. "BPS 2022-23 Enrollment Analysis." Boston Schools Fund, 2023.

Public Schools - Projected Future Needs

A frequent question from residents throughout the PLAN: Charlestown process was how would BPS accommodate an increase in students that might come with the increased residential density the Plan is proposing to allow. Like other urban school districts, BPS has seen declining enrollment over the last decade, but PLAN: Charlestown is also projecting up to an 80% increase in the neighborhood's population by 2050.¹¹⁴ This Plan identifies several strategies to address that growth.

Grades 1-12

The Demographics section of this chapter includes a population estimate that breaks down future residents by their age, in order to help predict demand for certain City services, like public schools. The Plan is projecting that there will be an additional 349 5-17-year-olds living in Charlestown by 2035, and 606 5-17-year-olds by 2050. To assess the District's ability to serve a larger student population, we focus on how many additional students population growth will translate to per grade, while also considering that about 30-38% of children will be served by schools outside of the BPS system. This equates to 20 additional children per grade level by 2035 and 35 additional children per grade by 2050.

Given the current number of empty seats in elementary schools in Charlestown, BPS will be able to serve the additional 20 students per grade by 2035 with minor, if any, adjustments to school programming. To serve the additional 35 students per grade by 2050 (approximately 15 new seats per grade since 2035), BPS may need to open one additional classroom per grade. Options for adding these additional classrooms include:

- Modifying the grade span at the Warren-Prescott, converting it from a preK-8 to a preK-6 school, and growing enrollment in grades 7 and 8 at Charlestown High School and other BPS 7-12 high schools.

- Leveraging the additional early childhood classrooms in the Edwards building, expected to open in Fall 2024, to free up a small number of classrooms at one or both of the elementary schools in Charlestown.
- If the Horace Mann School has moved to a new permanent location, reconfiguring the Edward school could increase the total number of seats offered in the neighborhood.

Grades K0, K1, & K2

PLAN: Charlestown is projecting up to 1,000 total new 0- to-4-year-olds by 2050, which could translate to 200 additional 3-year-olds and 200 additional 4-year-olds. Children of these ages are served by Universal Pre-Kindergarten. Since UPK is a mixed delivery system, children are served in BPS K0 and K1 classrooms, community based centers, and Family Child Care. Based on the City's annual child care survey, 50% of parents in Charlestown prefer BPS settings for their young children while an additional 27% desire a community based setting. It is clear that additional early childhood school seats will be needed for UPK. Some options to address this include:

- 6 early childhood classrooms are being opened at the Edwards building.
- The number of early childhood classrooms at the Harvard Kent School could be increased if necessary.
- Investing in new early childhood UPK classrooms in community-based and family-based settings in partnership with the Office of Early Childhood

Public Schools Recommendations

1. Complete the Edwards building renovation, including 6 early childhood classrooms.
2. Consider reconfiguring the Warren-Prescott School by converting it from a preK-8 to a preK-6, which would align with the District's preferred grade configuration and create space for additional elementary level classrooms. In this scenario, 7th and 8th grade students could be served at Charlestown High School or in several other 7-12 schools across the District that have excess capacity. This scenario would require collaborative planning with the Warren-Prescott community to determine if this is the best path forward and if so, ensure continuity of programming and a smooth transition for Warren-Prescott students and families.
3. Continue to collaborate with the Office of Early Childhood to open up new early childhood seats in community-based settings and family child care settings for infants and toddlers to accommodate projected population growth of 0-4-year-olds.
4. Continue to work with the Horace Mann School community to identify a permanent location, and begin conversations with the broader Charlestown community to consider future educational uses of the Edwards building.

SEWER CAPACITY AND WATER SUPPLY

Existing Water and Sewer Services

The Boston Water and Sewer Commission (BWSC) manages the delivery of drinking water and sewer services within the City. The Massachusetts Water Resources Authority (MWRA) is the wholesale provider of water and sewer services to 61 communities in the metropolitan Boston area. BWSC purchases treated water and wastewater treatment services from MWRA.

Sewer Infrastructure - Today's Needs

Sewers and water lines need regular maintenance and upgrades over time. The BWSC is working with the State and the Massachusetts Department of Transportation (MassDOT) to upgrade water, sewer, and drainage systems in Charlestown as part of the Rutherford Avenue Redesign project.

As part of a larger, citywide effort, BWSC is also working to replace existing Combined Sewer Overflow (CSO) systems with separated storm and sewer systems. According to the BWSC website, "combined sewers collect both wastewater and stormwater and convey it to the MWRA for treatment. During large wet weather events, combined sewers may reach capacity and the untreated combined flow is diverted to CSOs that flow directly into local bodies of water."¹¹⁵ BWSC is kicking off a Sanitary Sewer Evaluation Survey (SSES) in Charlestown to identify where there are CSOs that need to be replaced, as well as identify other areas where infiltration and inflow of water can be reduced. The SSES is expected to be completed by the end of 2024. It is believed by BWSC that the only area of Charlestown that still has a CSO system today is the Lost Village.

Climate resilience also is a key feature of BWSC's ongoing work across Boston. Guided by the Climate Resilience Initiatives Report released in 2017, several recommendations address sewer infrastructure specifically. Additionally, BWSC published an interactive City of Boston Inundation Model, which assesses flooding potential across the city in different kinds of storm events. The areas identified as vulnerable in Charlestown were the subject of the Climate Ready Charlestown Phases I & II, discussed in greater detail in the Resilience section of the Needs Analysis chapter.

Sewer Infrastructure - Future Needs

In general, new developments build their own local sewer lines. If additional sewer capacity is needed, it is the responsibility of the developments triggering the additional capacity need to perform infrastructure projects to increase the sewer capacity. Developments are also required to go through the Massachusetts Environmental Policy Act (MEPA) review process, which evaluates the capacity of state level MWRA infrastructure, like pump stations, and identifies if developers must contribute mitigation.

Local sewers managed by the BWSC dump into regional sewers and systems managed by the MWRA. The MWRA's sewer infrastructure serving Charlestown is at maximum capacity today, but, counter-intuitively, development in the neighborhood actually has the potential to reduce demand on the system. This is because for each gallon of new flow, BWSC requires developers to show that they are removing 4 times that amount from the system. This is called the Infiltration and Inflow Reduction requirement. This is achieved by removing extraneous flow which goes into the system during rain events, when the system is most strained. This can be done through onsite water capture and treatment, such as with bioswales, rainwater harvesting systems, or other means of controlling groundwater infiltration.

¹¹⁵ Boston Water and Sewer Commission. "Combined Sewer Overflows." Boston Water and Sewer Commission. Accessed July 17, 2023. <https://www.bwsc.org/environment-education/water-sewer-and-stormwater/cso-public-notification>.

Excess stormwater can also be pumped downstream into the Charles River, the Mystic River, or the Little Mystic Channel. It is very important that the stormwater have extremely low phosphorus levels, so it does not harm the ecosystem of the waterways. Today, long-buried sections of the Millers River run between Rutherford Avenue and I-93, collecting water which flows into the Charles River close to the Gridley Locks Footpath. It is unclear if the Millers River has additional capacity for storm water during rain events, and might need to be enlarged in the future.

¹¹⁶ Reuters. "Revere Closings." New York Times, March 17, 1984.

¹¹⁷ Fowler, Elizabeth M. "Company News; Schrafft Plans to Shut Down; Citites Boxed-Candy Sales Slump." New York Times, March 10, 1981.

Figure 93. Revere Sugar Refinery

Figure 94 (p.115). Domino Sugar Refinery

Water Supply - Past, Present, and Future

There should be no water supply issues in Charlestown, even if the neighborhood were to meet the maximum possible population growth projected by this PLAN (maximum 80% population growth by 2050. Refer to the demographics section of the Needs Analysis chapter for more information about the population projection). This is because, historically, Charlestown had much higher water demands than it does today. In 1950, the population peaked at just over 31,000 residents, while today the population is just over 20,000. Additionally, Charlestown historically had several high water demand uses which no longer exist today, including the active Navy Yard which ceased activity in 1974, the Schrafft's candy factory, which closed in 1981, the Revere Sugar Refinery, which closed in 1984, and the Domino Sugar Factory, which closed in 1988.¹¹⁶ ¹¹⁷ Collectively, the population loss and the loss of these major industries has meant that Charlestown has a surplus capacity for water supply.

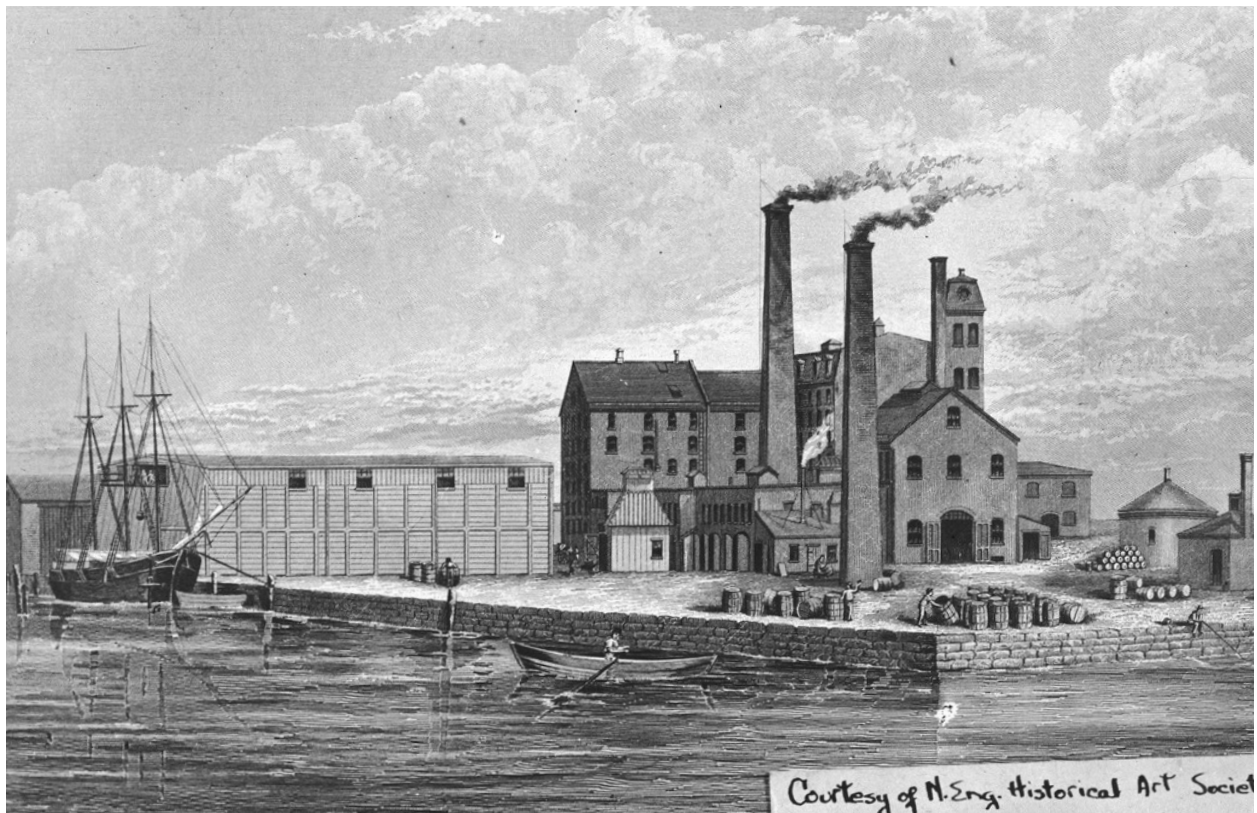


Figure 93

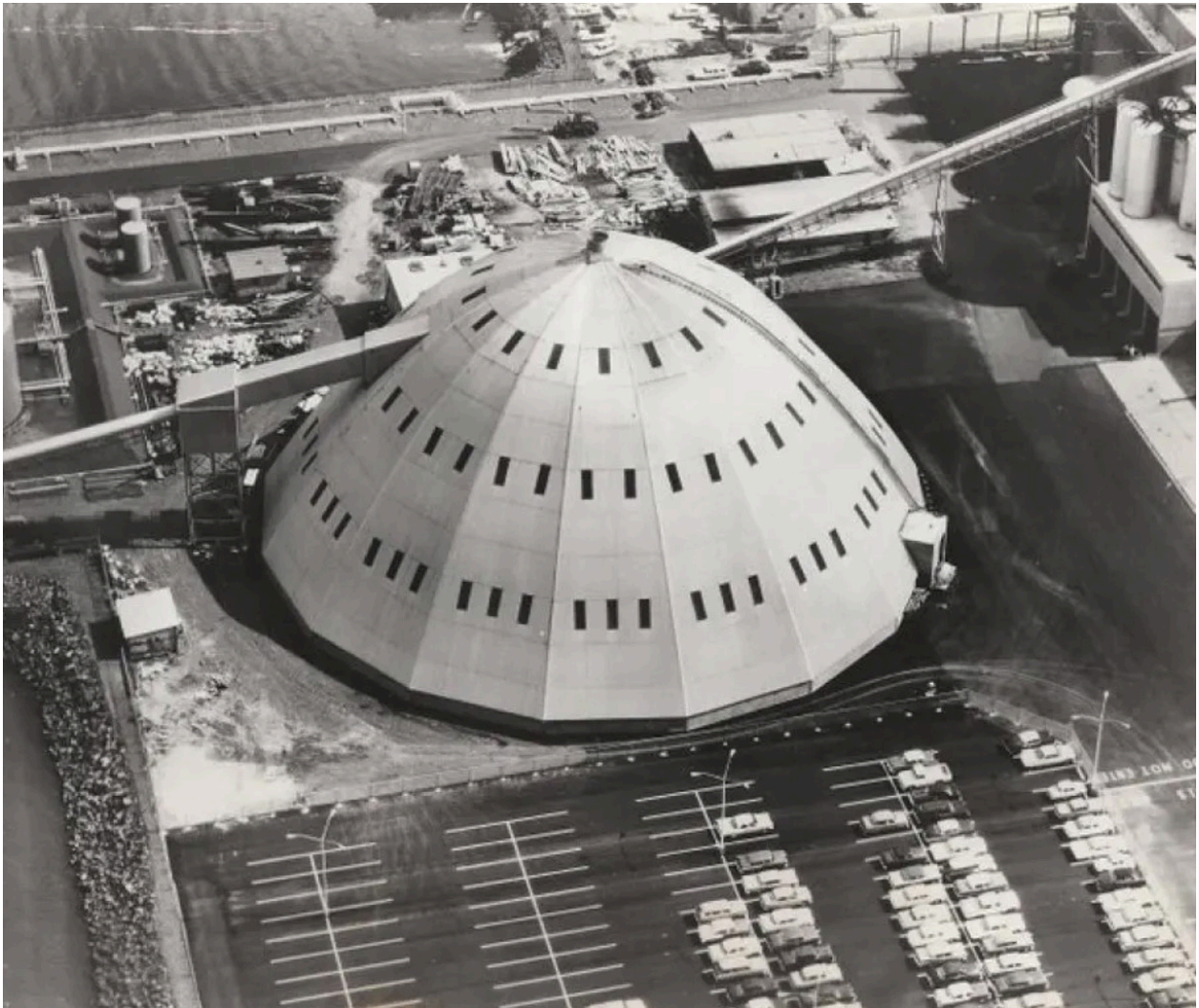


Figure 94

03

**SULLIVAN SQ +
RUTHERFORD AVE
AREA PLANNING
FRAMEWORK**

119 | **Introduction**

120 | **Scenario Iterations**
Community process; Scenario development

124 | **Land Use**

126 | **Height + Density**

130 | **Open Space**

134 | **Mobility**
Streets framework; Transit; Shuttle routes Bike network; Transportation Capacity Analysis

142 | **Spotlight: Austin Street Parking Lots**
Goals; Process

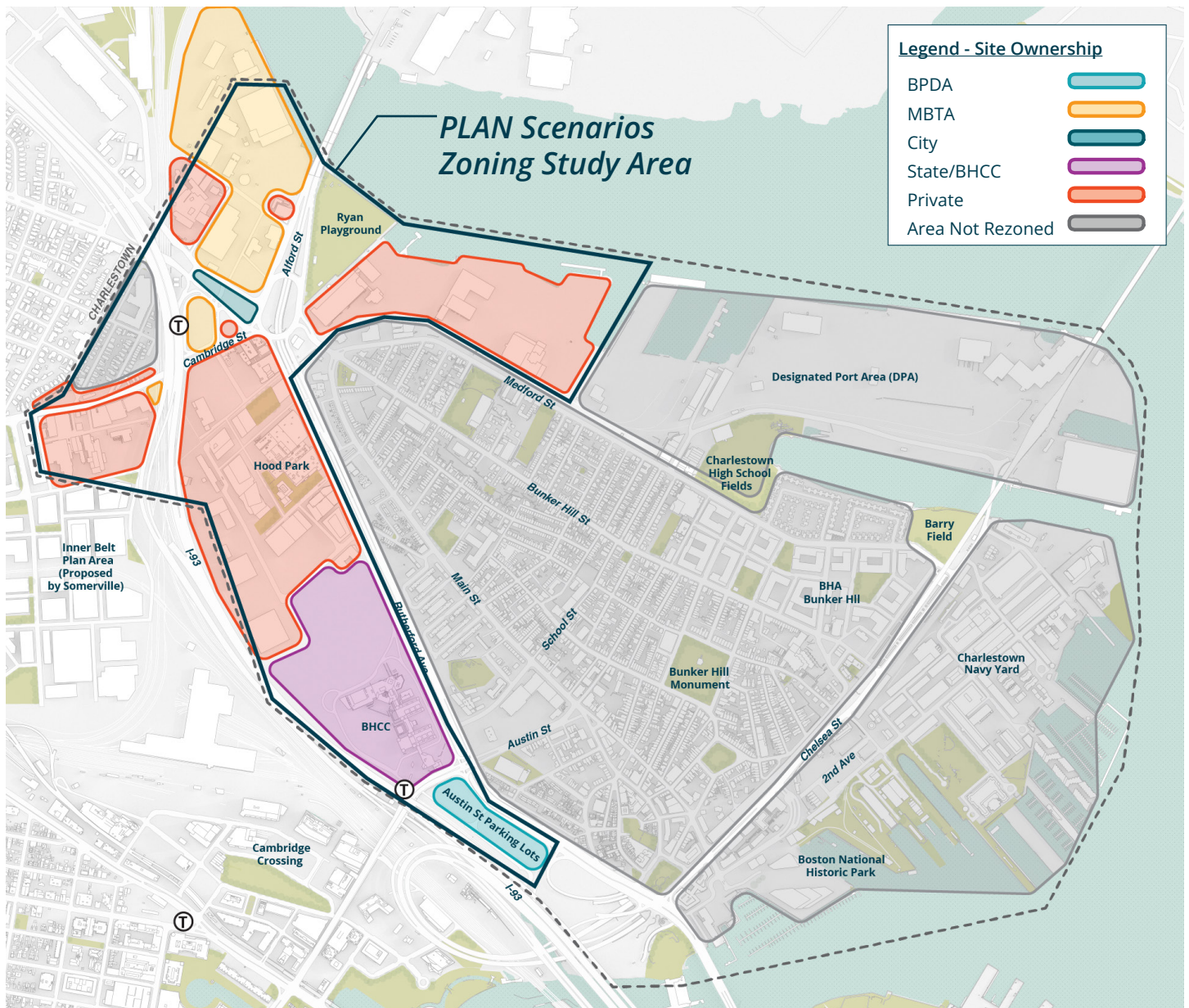


Figure 95

Introduction

Figure 95 (p.118). PLAN: Charlestown Scenarios Zoning Study Area Map with Major Property Owners

Figure 96. PLAN: Charlestown Community walking tour through the PLAN Study Area, along Bunker Hill Industrial Park Drive (between Hood Park and I-93). April 29, 2023.

What is Zoning?

Zoning is the set of laws that dictate the allowed shape, density, and use of development in a given area. Boston's Zoning Code incorporates a written code (describing setbacks, heights, allowed uses, densities, etc.) and maps.

One of the major outcomes of PLAN: Charlestown will be the rezoning of portions of the neighborhood to promote future growth in Charlestown in areas that are underutilized today. These areas, specifically west of Rutherford Avenue, south of Cambridge Street, east of Medford Street, and surrounding Sullivan Square, have been home to industrial uses in recent decades, but are now seeing proposals for other uses, like housing and lab. Imagine Boston 2030 also identified Sullivan Square as a growth area. Figure 95 highlights the Study Area for new zoning, which this Chapter focuses on.

In the past, each development proposal for this area of Charlestown has gone through Boston's development review process without a plan to guide a coordinated response. Hood Park, 420 Rutherford Ave, and the Bridgeview Apartments are all examples of developments west of Rutherford Avenue which have been approved since 2010. Without a plan and updated regulatory framework, it is difficult for both city officials and community members to assess what size buildings should be built where, what community benefits and mitigation is needed, and how new developments should tie into the neighborhood's larger open space and mobility networks. Without a plan and new zoning, development will not stop, it will simply be less coordinated and result in missed opportunities to address community needs. PLAN: Charlestown strives to make future development in the study area more predictable, promote community priorities like housing and open space, and establish a more transparent process of determining needed mitigation.

This section describes the community process of iterative scenarios that were used to arrive at this PLAN's framework for zoning, open space, and mobility for the Study Area. The proposal for each topic is described in greater detail. Finally, the application of this framework to the BPDA-owned Austin Street Parking Lots is explored, with an overview of the development process for those publicly owned parcels, which has run concurrently with the PLAN: Charlestown process.



Figure 96

Scenarios Development

Figure 97. Graph of surveys received to Scenario Iterations 2 and 3, by topic.

Figure 98 (p.121). PLAN: Charlestown Map.Social web page. Released June 2021.

Figure 99 (p.121). PLAN: Charlestown draft scenario iterations for public comment. Released July 2022.

The 'Visioning and Goals' stage of the planning process, from 2020 to 2021, established what PLAN: Charlestown should strive to achieve in the Study Area. The PLAN then created a framework for the Study Area through the iterative creation of 'scenarios' for the future. Each scenario iteration included new land uses, building densities, open spaces, and mobility infrastructure within the Study Area. Each iteration received public comment, becoming more refined and more detailed. A transportation capacity analysis and financial feasibility analysis, conducted by consultants, also informed the process. The transportation capacity analysis is described at the end of this Chapter. This PLAN document showcases the 6th iteration of the scenarios, and is the final version which will guide new zoning and review of future developments.

SCENARIO ITERATION 1: MAP.SOCIAL

The first iteration of the scenarios was created by members of the Charlestown community through the platform, "Map.Social". Once residents and stakeholders were able to add different kinds of elements to the map, identifying key destinations and desired paths, areas ideal for residential, commercial, industrial, and mixed land uses, as well as locations for new open spaces, needed public realm improvements, and redevelopment opportunities. Figure 98, to the right, shows this web page with several of these layers turned on. Users could see not only the items they added to the map, but also what others had added.

SCENARIO ITERATIONS 2 + 3:

Based on the co-created Iteration 1 scenario, two scenarios were generated, called the "Jobs + Connect" and the "Housing + Play" scenarios. These scenarios offered a series of trade-offs for community members to respond to, and were presented side-by-side through an online story map (figure 99). The story map included 9 surveys, addressing each topic covered in the scenarios, from proposed street layouts and new open space, to where greater density should be located. The surveys were offered online and in paper, and in both English and Spanish. In total, 952 surveys were received across the 9 topics (figure 97).

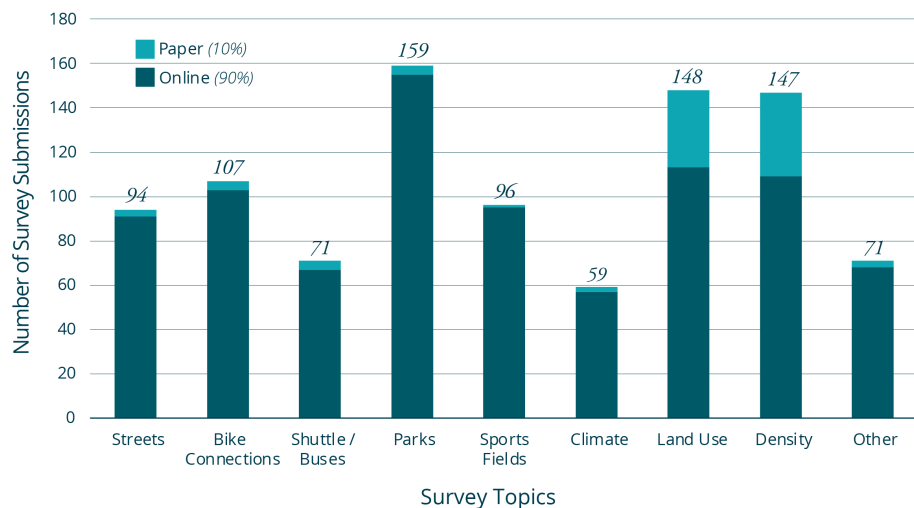


Figure 97

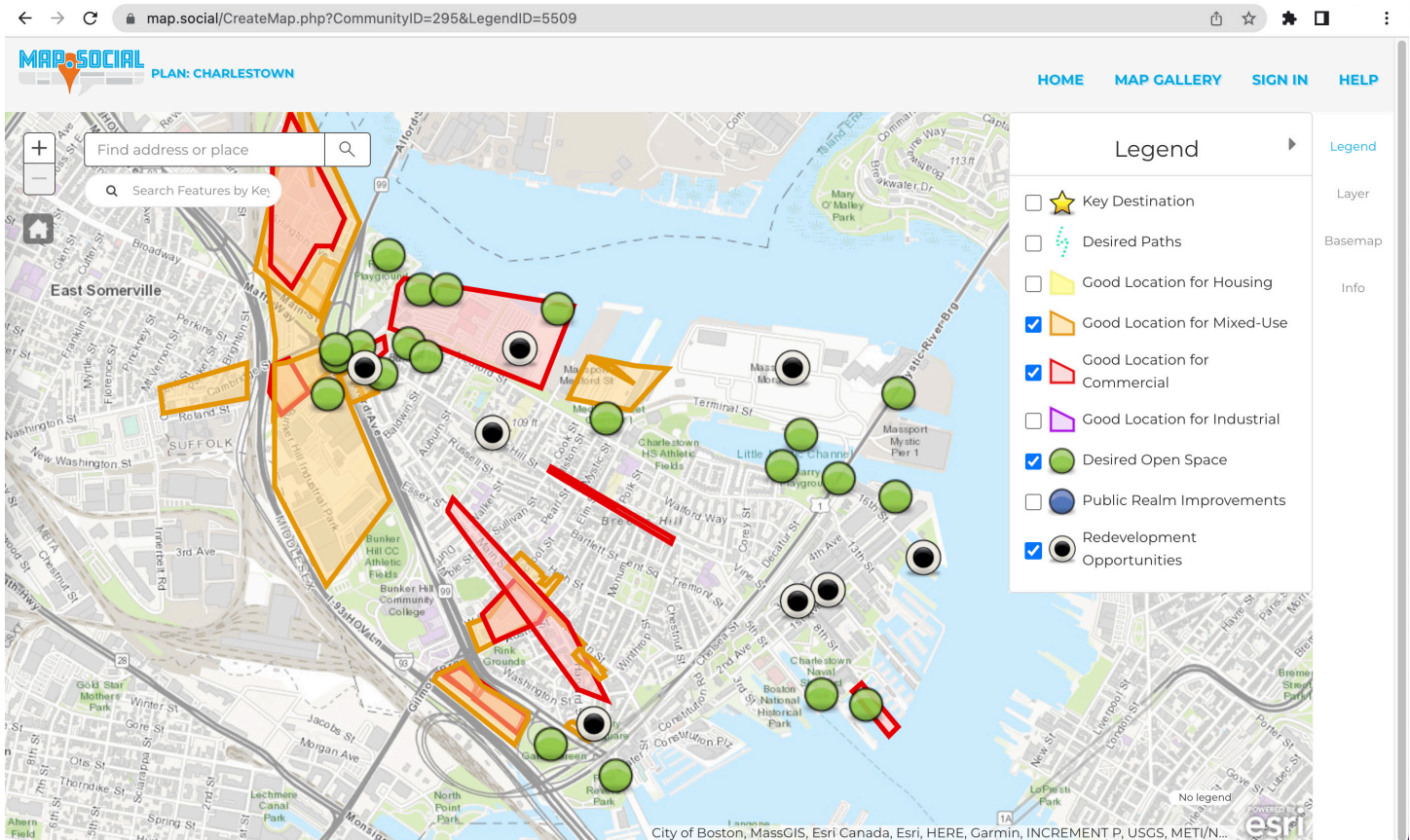


Figure 98

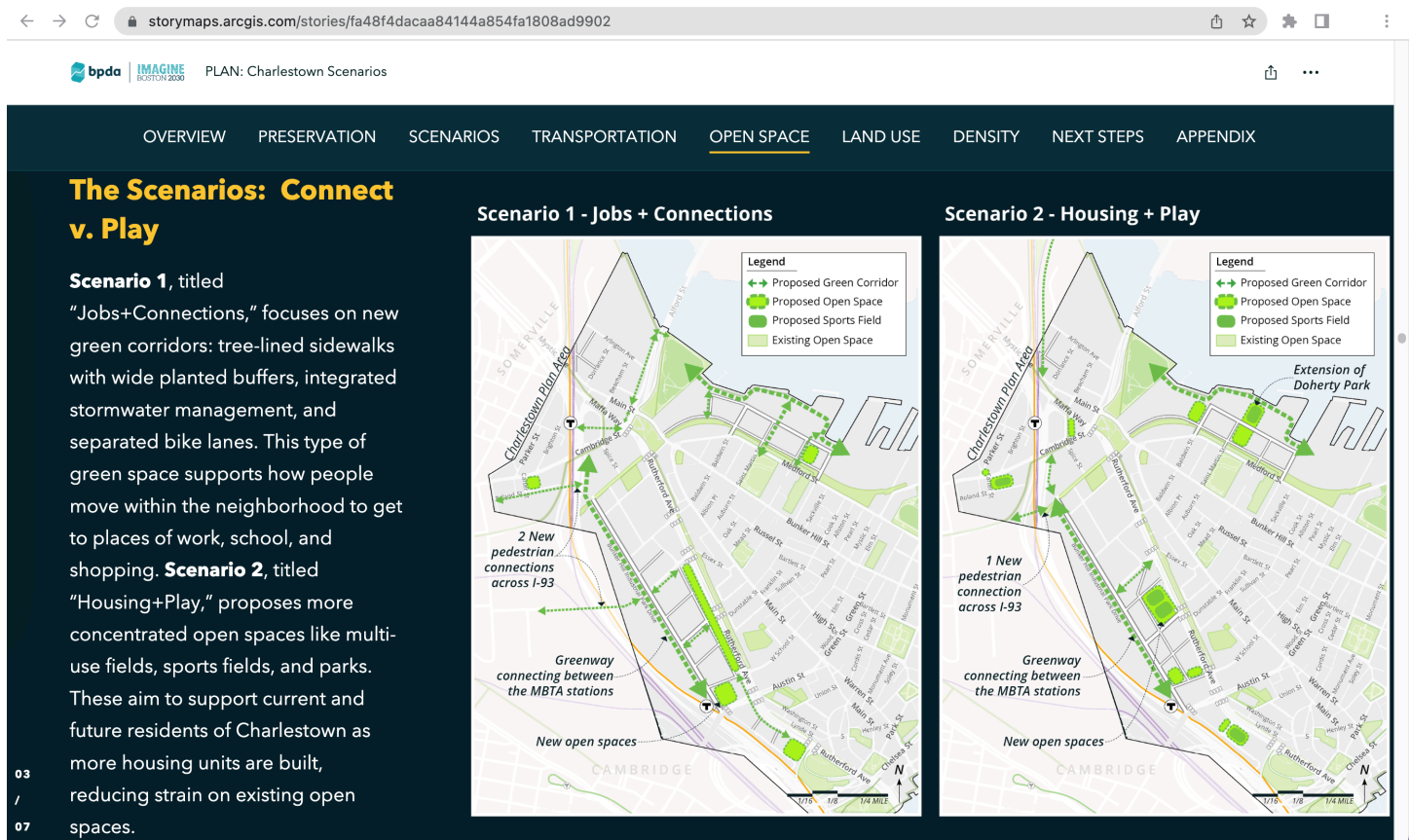


Figure 99

SCENARIO ITERATION 4: DRAFT HYBRID SCENARIO

After analyzing the survey responses received to Scenario Iterations 2 and 3, the Interboro Partners consultant team took the feedback, and combined the best of both of the previous scenarios into the 'Draft Hybrid Scenario'. This Scenario Iteration included the addition of the 'green loop' concept, three new shuttle routes, and a new land use proposal. It was presented to the PLAN: Charlestown Advisory Group in January of 2023, receiving constructive comments from both advisory group members and members of the public who were in attendance.

SCENARIO ITERATION 5: FULL HYBRID SCENARIO

Based on the Advisory Group's comments on Scenario Iteration 4, the Interboro Partners team edited the scenario again, producing the 'Full Hybrid Scenario', which was presented at a community meeting in March of 2023. This iteration also took into account the findings of both a transportation capacity analysis and a financial feasibility analysis, conducted by the larger consultant team. Due to the findings of the transportation capacity analysis, Scenario 5 included a 10% reduction in total possible square footage, as well as a preference for housing over commercial uses. The transportation capacity analysis is discussed in greater detail towards the end of this Chapter. The financial feasibility analysis helped determine where allowing greater densities in the neighborhood would help to achieve and fund other benefits identified by the community as priorities and recommended by PLAN: Charlestown.

Community engagement for the Full Hybrid Scenario included a survey which received 390 responses and a 'Major Engagement Phase' consisting of over a dozen events. Scenario 5 was also turned into a comic book explaining PLAN: Charlestown and illustrating the major planning proposals from the Full Hybrid Scenario, attempting to reach a larger audience, especially Middle and High School students (figures 101 and 102).

SCENARIO ITERATION 6: FINAL SCENARIO (DRAFT PLAN: CHARLESTOWN)

Scenario Iteration 6, shown in the remainder of this Chapter, improves upon all of the previous scenarios. It takes a wide range of public feedback regarding the Full Hybrid Scenario into account, including (1) lowering the maximum building height in the neighborhood by 70'; (2) improving the proposed shuttle and bike networks; and (3) leveraging new tools to promote the creation of housing.

Figure 100. Hybrid scenario survey analysis - what respondents wanted to see changed. Survey closed June 9, 2023.

Figure 101 (p.123). Hybrid scenario comic book cover. Produced by Interboro Partners.

Figure 102 (p.123). Hybrid scenario comic book spreads. Produced by Interboro Partners.

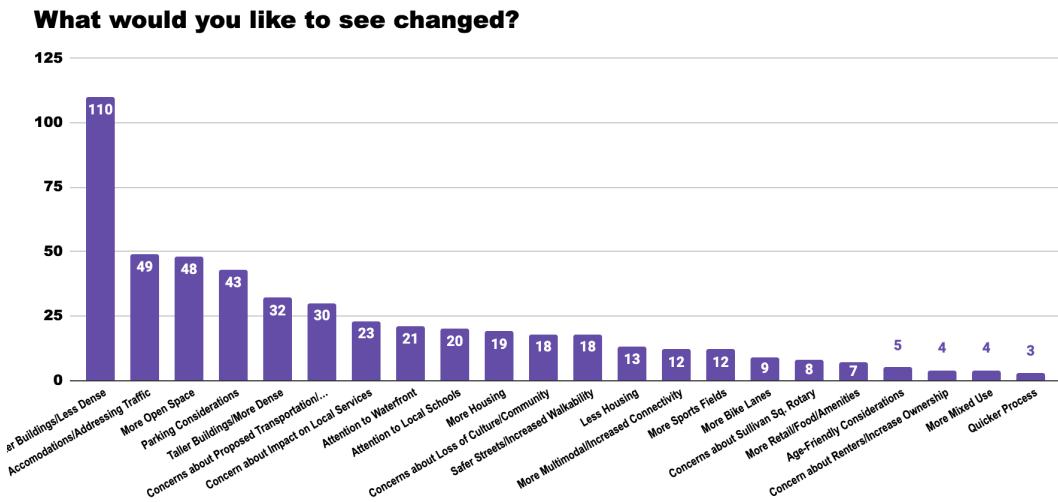


Figure 100

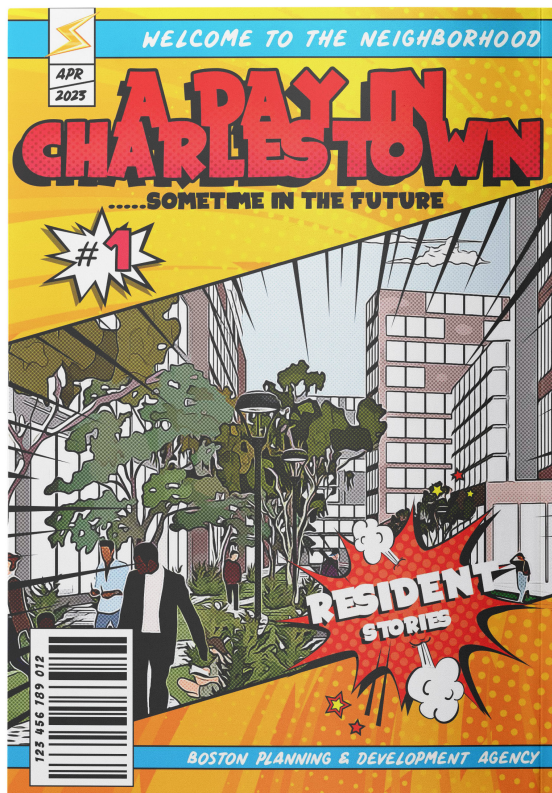


Figure 101



Figure 102

Land Use

Figure 103. Scenario 2+3 land use survey response

Figure 104 (p.125). Proposed Study Area land use map

Figure 105 (p.125). Proposed retail nodes and corridors in Study Area map

The land within the Zoning Study Area prior to PLAN: Charlestown was zoned almost exclusively for Light Industrial uses, with the exception of Bunker Hill Community College (BHCC), which was zoned for ‘Community Facilities’. Though industrial uses are important to the functioning of the city, these uses do not rely on transit in the same way as other uses like housing. Recognizing both the imperative to build new housing close to transit and the new and different uses already proposed by existing land owners within the Study Area, PLAN: Charlestown offers a framework to guide the location, use, size, look and feel, and community benefits associated with new development.

KEY PROPOSED LAND USE CONCEPTS

The land use concepts informed by community feedback and planning best practices which are embedded in this framework (figure 104) include:

“We are in a housing crisis for renters and its hard to find land to build on so the more we can support this the better”

- Charlestown Resident, July 20, ‘22

1. Encouraging housing, especially affordable housing, and locating new housing adjacent to existing residential areas
2. Prioritizing higher density mixed-use development around the Sullivan Square and Community College MBTA stations
3. Limiting commercial and lab buildings, which typically have greater transportation impacts than housing
4. Buffering the residential neighborhood core from industrial areas and the elevated I-93 interstate with commercial uses
5. Allowing the continuation of key industrial uses in the neighborhood, including the MBTA’s bus yard and the active Designated Port Area
6. Allowing ground floor retail everywhere in the Study Area, while encouraging it specifically along major boulevards and main streets, and at key nodes (figure 105)
7. Zoning changes and individual development projects should incorporate affordable commercial rent to support locating small businesses in the neighborhood

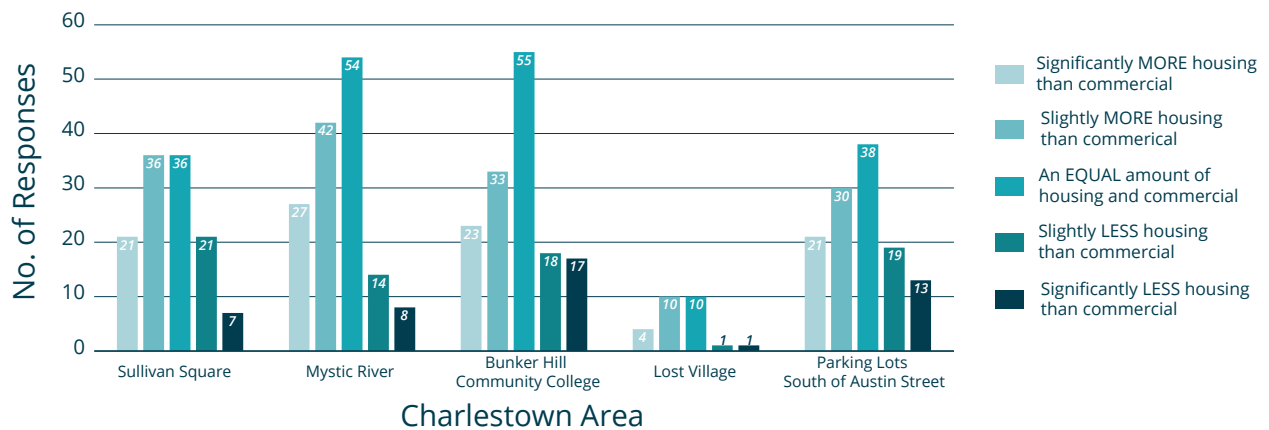


Figure 103

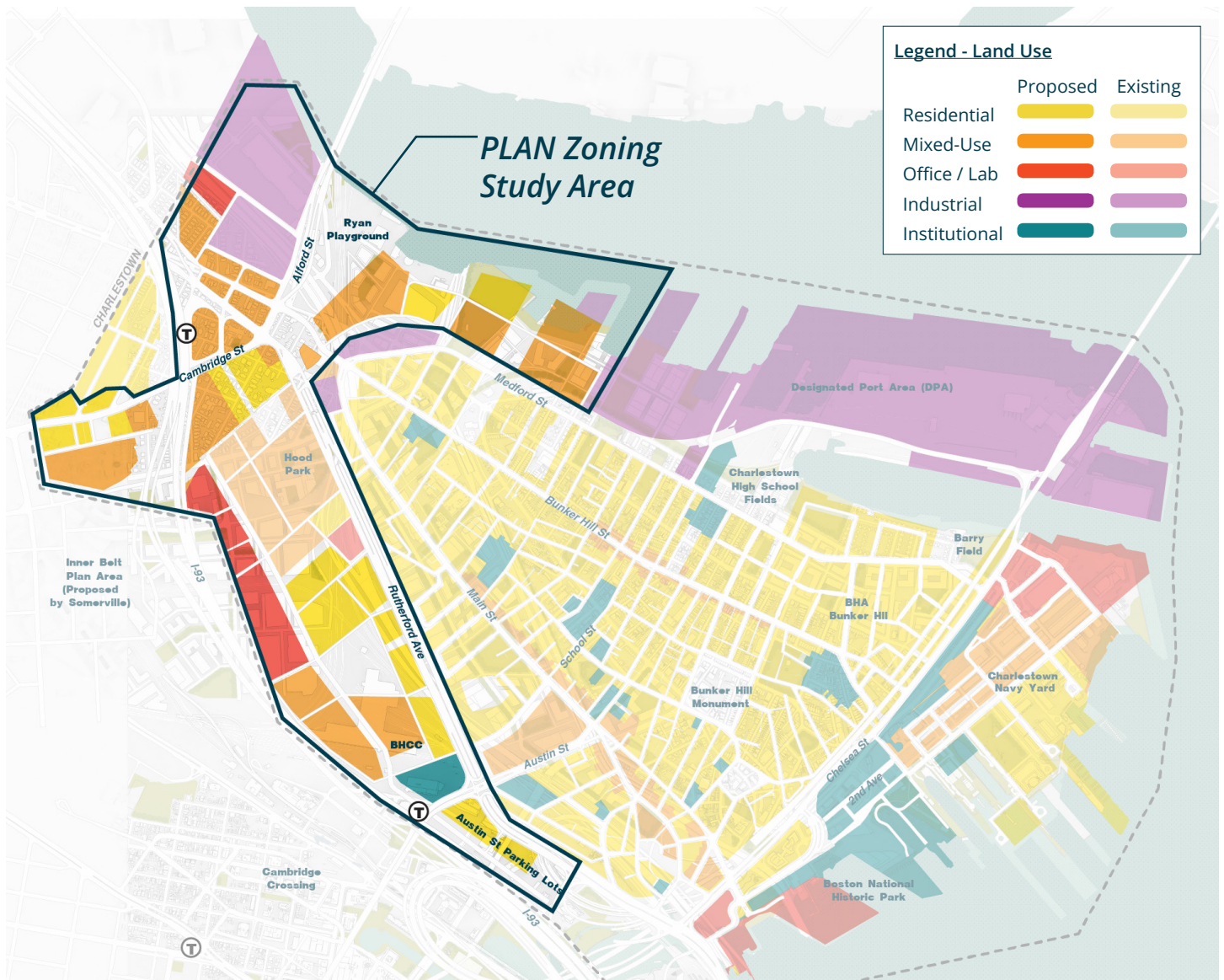


Figure 104

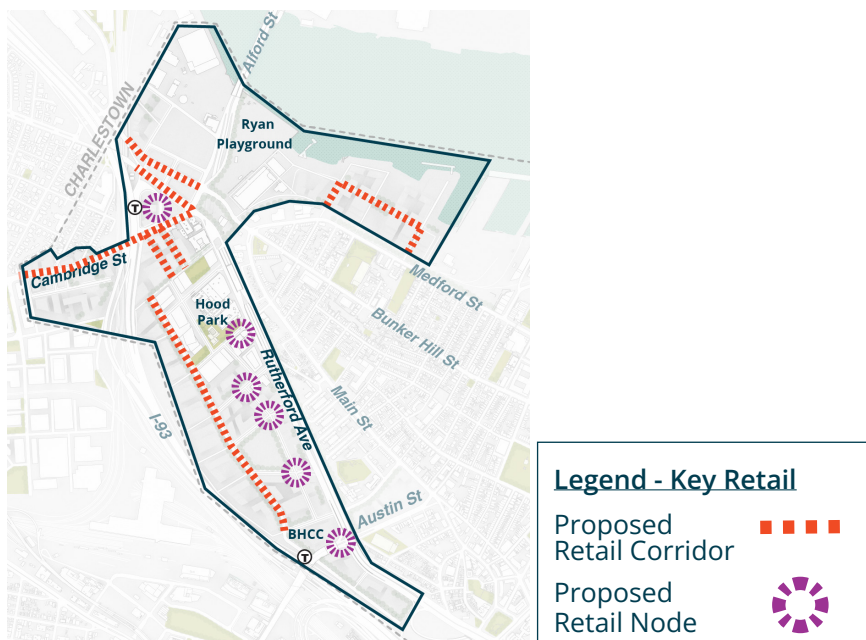


Figure 105

Height + Density

What is Floor Area Ratio?

Floor Area Ratio (FAR), is a measure of how much density, or square footage, can be built on a parcel of land.

The FAR number acts as a multiplier of the total parcel area. For example, if a piece of land is 3,000 square feet, and the FAR is 2.0, then up to 6,000 square feet of building could be developed on the land, which is the parcel area multiplied by 2.

Figure 106. Proposed Study Area density map

Figure 107. Proposed Study Area height map

Figure 108. Height stepping between I-93 and Rutherford Avenue diagram

“High density housing near 93 seems like a good solution for increasing housing for Boston without infringing on the historic areas.”

- Charlestown Resident, April 7, 2023

One way in which the City of Boston has sought to tackle the challenge of balancing the need for economic improvements and demand for services is through the use of Planned Development Areas (PDAs). PDAs are a zoning overlay that establishes specific conditions for complex, campus-like projects of at least 1 acre in size. PDAs are an effective tool that require new developments to provide specific public benefits. Public benefits can include improvements, such as: the creation of new open space; preservation of historically significant buildings; provision of affordable housing; or significant mobility improvements. Without PDAs, individual development projects on large parcels could result in less predictable development outcomes, less community oversight on the development of the parcel(s), and little to no public benefit for residents. PLAN: Charlestown has identified the parcels surrounding major transit nodes and corridors as areas that could benefit from the use of PDAs.

PLAN ZONING STUDY AREA

The land within the Study Area prior to PLAN: Charlestown was zoned for low density industrial uses, almost entirely at a 2.0 Floor Area Ratio (FAR). Even Charlestown's existing residential fabric is built to higher FARs, between 3.0 and 4.0 in much of the neighborhood. Higher density areas have many advantages: they have the potential to be more vibrant and support more retail due to increased foot traffic; they have the ability to provide a greater quantity of housing; and higher density development has the potential to provide greater mitigation in the form of more open space and community benefits.

PLAN: Charlestown seeks to increase allowed density in parts of the Study Area, while also respecting the built context and demands on the transportation network. Maximum densities proposed here are informed by a transportation capacity analysis, described further in the mobility section of this Chapter.

KEY PROPOSED HEIGHT + DENSITY CONCEPTS

The height and density concepts informed by community feedback and urban design best practices embedded in this framework (figure 106) include:

1. Allowing the greatest density around the Sullivan Square and Community College MBTA stations to help support low-impact development. A density bonus (described below) for housing development on parcels within 1000' of the MBTA stations incentivizes both transit-oriented development and housing production.
2. Stepping down heights and densities towards Charlestown's existing residential fabric (figures 107 and 108).
3. Keeping maximum densities at their existing level (2.0 FAR) along the Mystic River, where Massachusetts State Law Chapter 91 requires significant waterfront access and stepping down building heights to the river's edge.
4. Allowing greater heights and densities towards I-93 to encourage buffering of the elevated interstate.

RESIDENTIAL DENSITY BONUS TO ENCOURAGE NEEDED HOUSING CREATION

PLAN: Charlestown proposes a density bonus of 1.0 FAR to residential development projects located on parcels within the Study Area located both west of I-93 and within 1,000 feet of an MBTA station in the neighborhood.

Figure 106 shows the area within 1,000' of MBTA stations and outlines the resulting density bonus area. Residential projects that wish to take advantage of this density bonus would also need to include aggressive transportation demand management (TDM) measures including low parking ratios to qualify for the density bonus. This density bonus is specifically designed to incentivize the development of housing near transit.

ADAPTIVE REUSE OF EXISTING BUILDINGS

Where a parcel has an existing building contributing to Charlestown’s historic industrial character, the existing buildings should be retained and included in future development designs in order to qualify for any density above the 2.0 FAR. Examples of such structures include 24, 32, and 40 Cambridge Street, 20 Roland Street, and 2-12 Spice Street. Refer to the Adaptive Reuse section of Chapter 4 for more information.

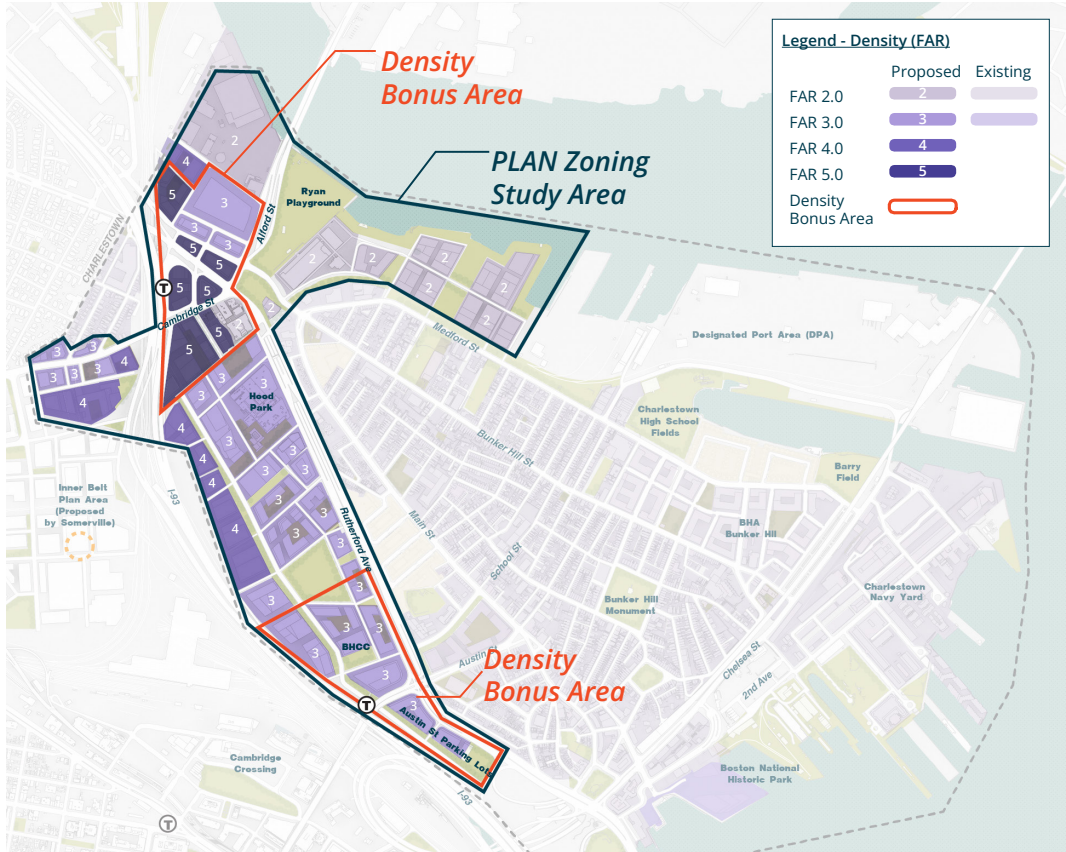


Figure 106

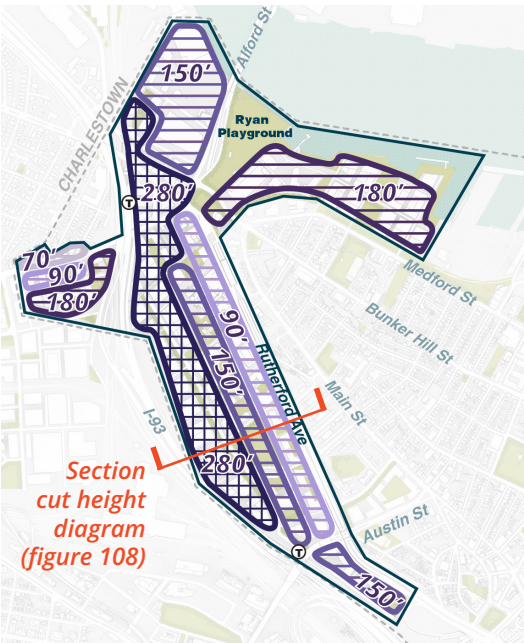


Figure 107. Proposed Study Area height map

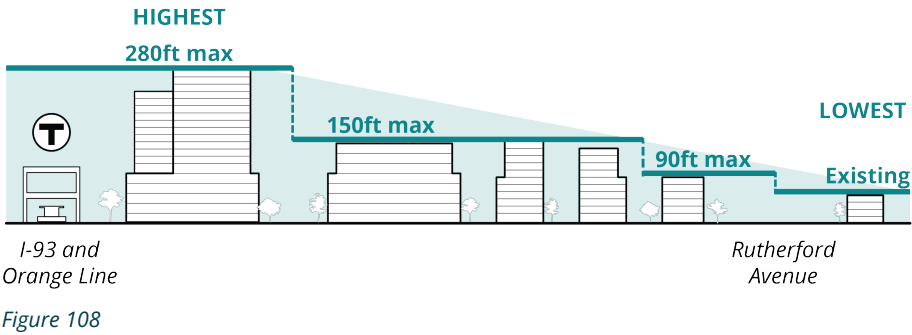
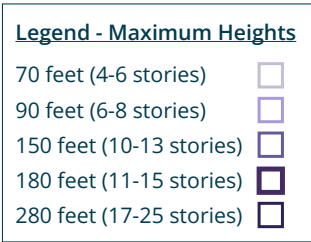


Figure 108



“The line of larger buildings along the highway will help provide a buffer for the neighborhood.”

- Charlestown Employee, April 14, 2023



Figure 109. Vision for the future of the Bunker Hill Community College campus area



Figure 110. Open Space Scales

Figure 111 (p.131). Proposed open space network map

Figure 112 (p.131). Proposed Charlestown green loop concept map

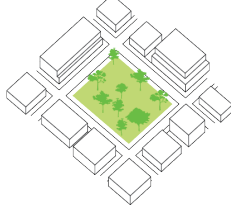
¹¹⁸ For more information, refer to the Open Space section of the Neighborhood Needs Analysis Chapter of this PLAN.

Open Space Scales

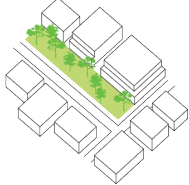
Pocket Park Scale



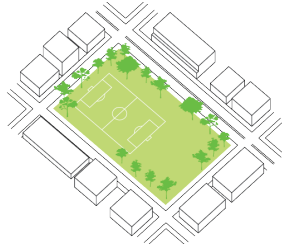
Neighborhood Scale



Linear Scale



Community Athletic Scale



Waterfront Scale

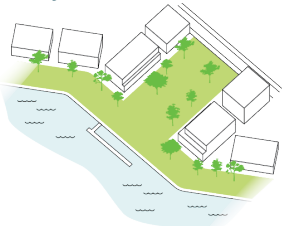


Figure 110

Open Space

Charlestown is in need of new open space to serve its existing and future population, as described in the Needs Analysis Chapter of this PLAN. Much of Charlestown's Original Peninsula and Lost Village areas are completely built out and leave little opportunity to add new open space. However, the Sullivan Square and Rutherford Avenue areas offer enormous potential replace existing surface parking and paving with development that incorporates new green space, sports fields, and greenways, filling out the missing areas of Charlestown's open space network.

As per Chapter 2, there is a need to maintain the ratio of open space as the population grows over the next 30 years. The plan anticipates open space opportunities through public-private partnerships whereby new open space will be expected as part of development. This will create an anticipated 34 acres of new publicly-accessible or -owned space. Additionally, a significant portion of industrial land directly adjacent to the PLAN Study Area is zoned Maritime Industrial, and is a Designated Port Area (DPA), restricting opportunities for community uses. DPAs are designed to protect maritime uses, which are limited in the area, and are managed by the State, and are therefore outside the purview of the City. However, should the DPA be lifted due to lack of demand for maritime uses, the City would strongly support uses that meet the needs for additional open space to align with the plan.

KEY PROPOSED OPEN SPACE NETWORK CONCEPTS

The open space concepts informed by community feedback and planning best practices that are embedded in this framework (figure 111) include:

1. Creating open spaces of different scales and types across the Study Area to serve a variety of needs, populations, and programs.
2. Adding at least two full-sized multi-use sports fields and additional sports practice spaces, per the Needs Analysis recommendations.¹¹⁸
3. Replacing the field at Bunker Hill Community College with public green space that will serve the needs of Charlestown residents.
4. Connecting various parts of the neighborhood through a proposed 'Charlestown Green Loop' - a ring of open space circling the neighborhoods edges, adding up to a 3+ mile, low-street pathway.
5. Utilizing existing rail corridors to provide linear parks and greenways.
6. Making the Mystic River waterfront more publicly accessible with a resilient esplanade connecting to Ryan Playground.

OPEN SPACE SCALES

This PLAN's proposed green network incorporates 5 scales of open space: Pocket Park, Neighborhood, Linear, Community Athletic, and Waterfront. Open spaces at these scales serve a range of functions. A pocket park scale space might be a dog park or a playground, and is typically only used by residents living within the immediate vicinity. A neighborhood or community athletic scale open space might contain many functions and users might be willing to come from all over the neighborhood to the space. A waterfront scale open space is a destination, which people might travel from all over Boston to visit.

THE CHARLESTOWN GREEN LOOP

The Charlestown Green Loop is a proposed 3+ mile greenway which wraps Charlestown's edges and connects to many of the neighborhood's major open spaces, including Ryan Playground, Hood Green, and Charlestown Naval Shipyard Park (figure 112). The loop is composed of several linear elements, including the Lower Mystic Greenway and a proposed green boulevard which runs from the Sullivan Square to Community College MBTA stations. The Green Loop does require crossing several major roadways, which should be prioritized for safety improvements and crossing aids as the loop is developed.

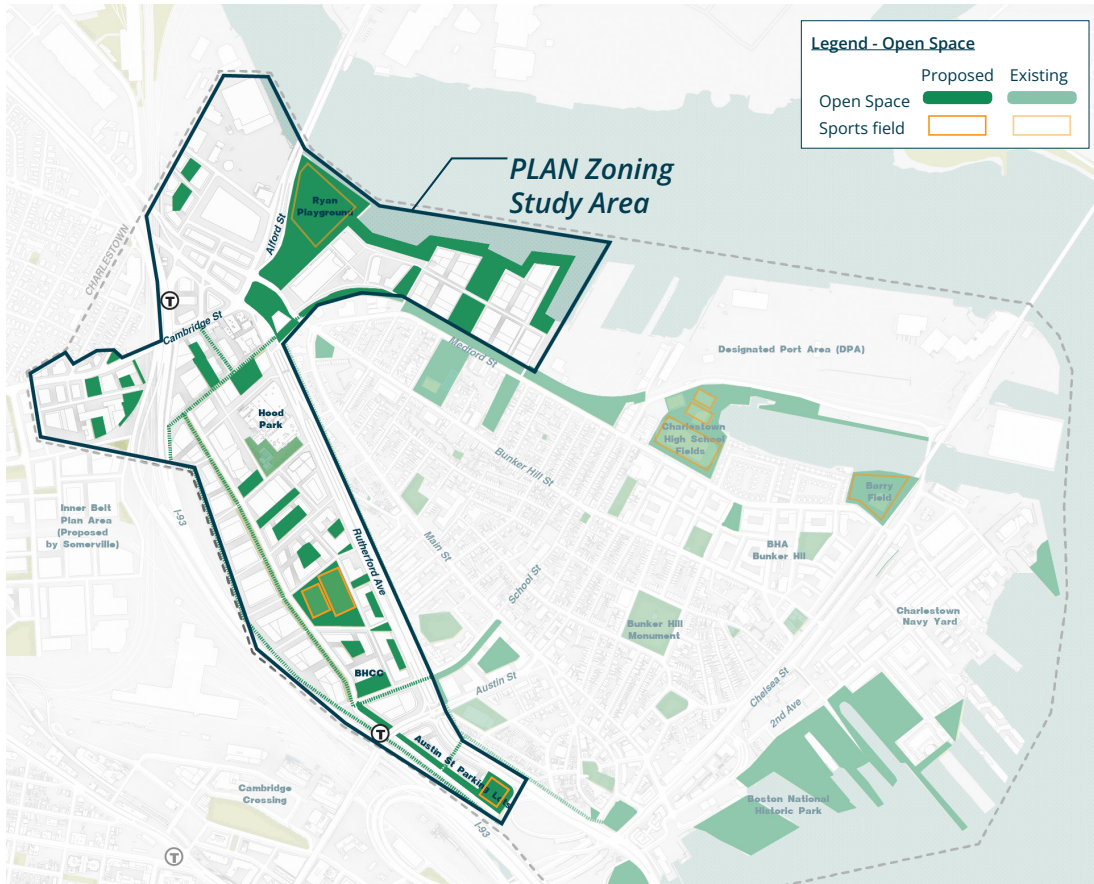


Figure 111

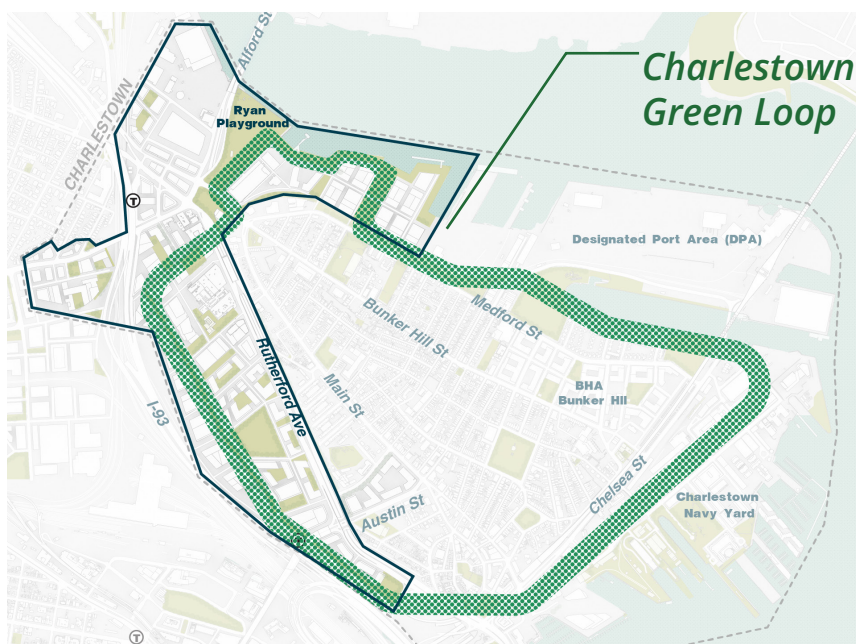


Figure 112

“I love the Charlestown Esplanade concept, just need to ensure it is well lit and safe for our community. The green jogging loop is important to tying the Rutherford corridor into the rest of the community.”

- Charlestown Resident, April 25, 2023

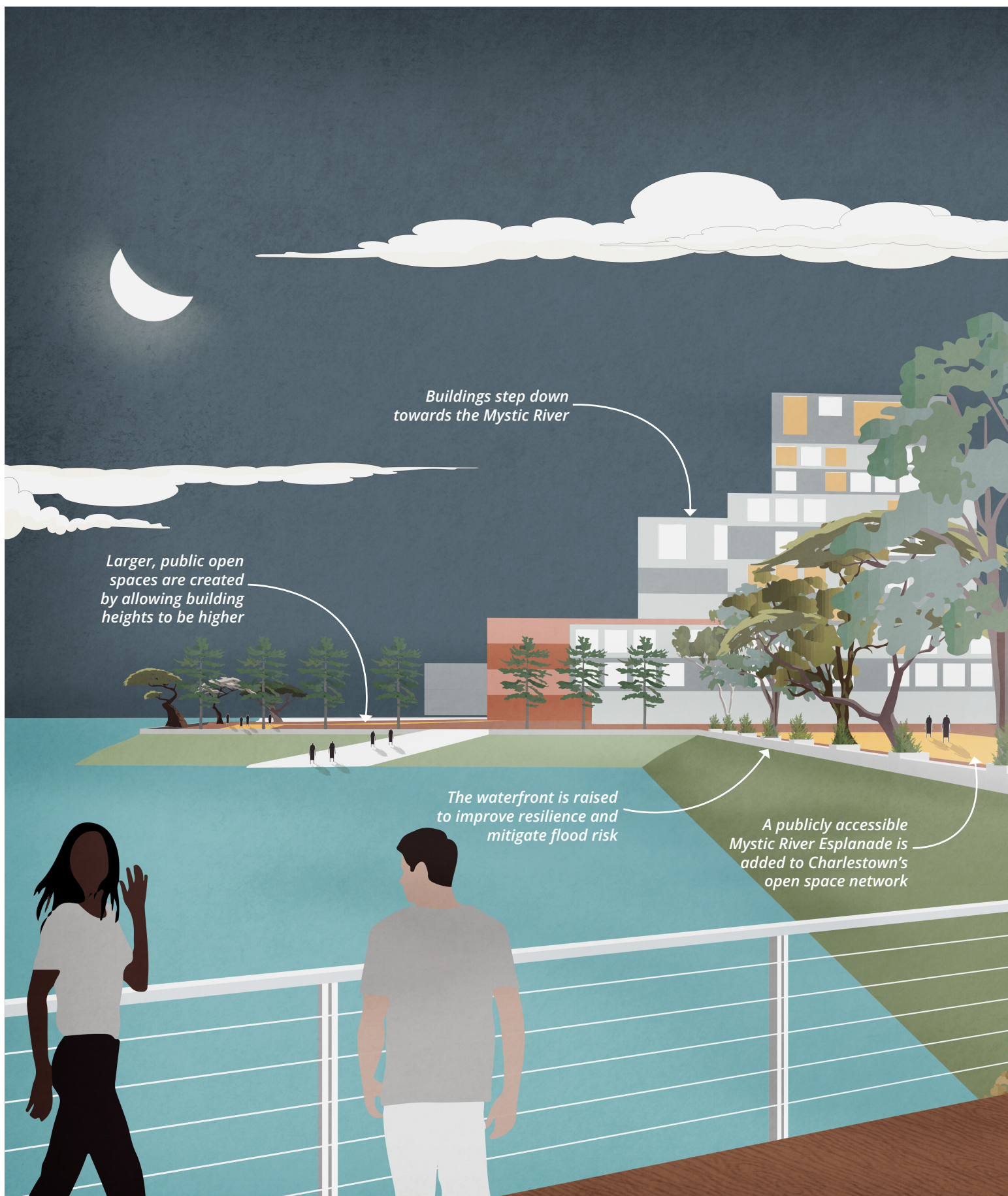


Figure 113. Vision for the future of the Mystic River waterfront



PLAN: Charlestown's mobility framework for the Study Area includes streets, transit, and bike network recommendations that are aligned with *Go Boston 2030*. This framework is intended to help guide the development of street networks where few or no public streets exist today to ensure travel by walking, biking, and transit are highly accessible to new residents, workers, and visitors.

Figures 115-118 (p.135).
Street types sections.

PLAN: Charlestown offers a framework for future streets in the Study Area, proposing a network of new streets and the elements each street should include. In total, the framework is composed of five street types:

- [illegible]

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2. Major Connectors are primary streets and include comfortable sidewalks, furnishing zones, separated bike lanes. They may have parking lanes on none, one, or both sides of the street.

3. Minor Connectors have a low volume of vehicle traffic, have comfortable sidewalks, furnishings, may have on-street parking, and have painted bike lanes or traffic calming to provide for comfortable biking.

4. Service Streets provide space for back-of-house activities. Sidewalks must be provided. In Charlestown, Service Streets run alongside barriers like highways, rail lines, and waterways. Along I-93, shared use paths are included in Service Streets as part of the broader regional path network.

5. Accessible Alleys separate uses like trash, loading, and parking access from primary building frontages. Accessible Alleys are narrow, flush, and may be traversed by any vehicle. These streets must be fully accessible.

Where are curb cuts allowed?

Not Permitted: Curb cuts are not permitted on Main Streets or Major Connectors unless access from another street is not physically possible.

Permitted: Curb cuts are permitted on Service Streets and Alleys. They are permitted but should be limited on Minor Connectors.

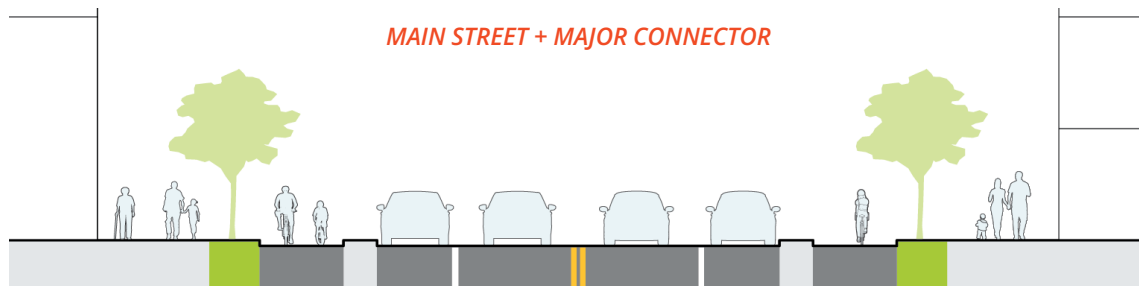


Figure 115

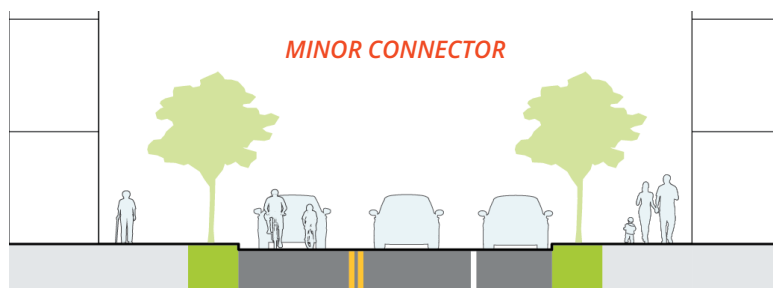


Figure 116

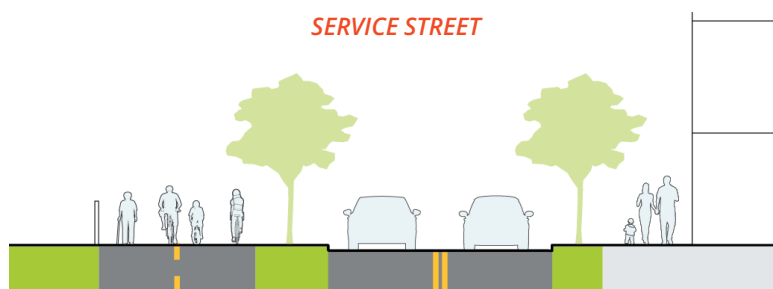


Figure 117

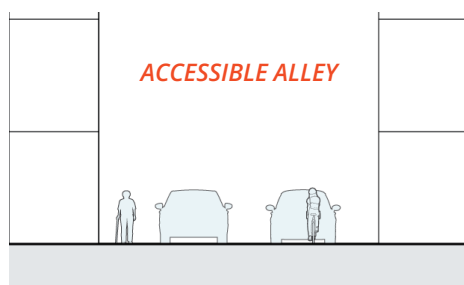


Figure 118

Figure 119. Proposed transit network map

¹¹⁹ The shuttle routes proposed in this PLAN are undergoing further study by the Lower Mystic Transportation Management Association (LMTMA). They are modeled on the existing Mission Hill Link shuttle service in Boston. Additional definition will be added in the future, including frequency and finalized stop locations. Though final routing and stop locations will be yet to be finalized, introducing transit service along Medford Street and within the Navy Yard are priorities.

TRANSIT NETWORK

Through the MBTA's Bus Network Redesign (BNRD), three new high-frequency routes with service every 8-15 minutes all day will be implemented in Charlestown. While this represents a significant improvement in transit service over existing conditions, PLAN: Charlestown acknowledges the significant increase in potential development by recommending additional transit services.¹¹⁹

- A new high-frequency bus line on Rutherford Avenue
- Three new, publicly accessible, privately funded, shuttle routes to augment MBTA service
- Further study of a new MBTA commuter rail infill station at Sullivan Square.

These upgrades to the transit system will work in harmony with major transit-supportive infrastructure projects including the MBTA's Orange Line Transformation and the addition of dedicated bus lanes on neighborhood gateways like the North Washington Street Bridge.

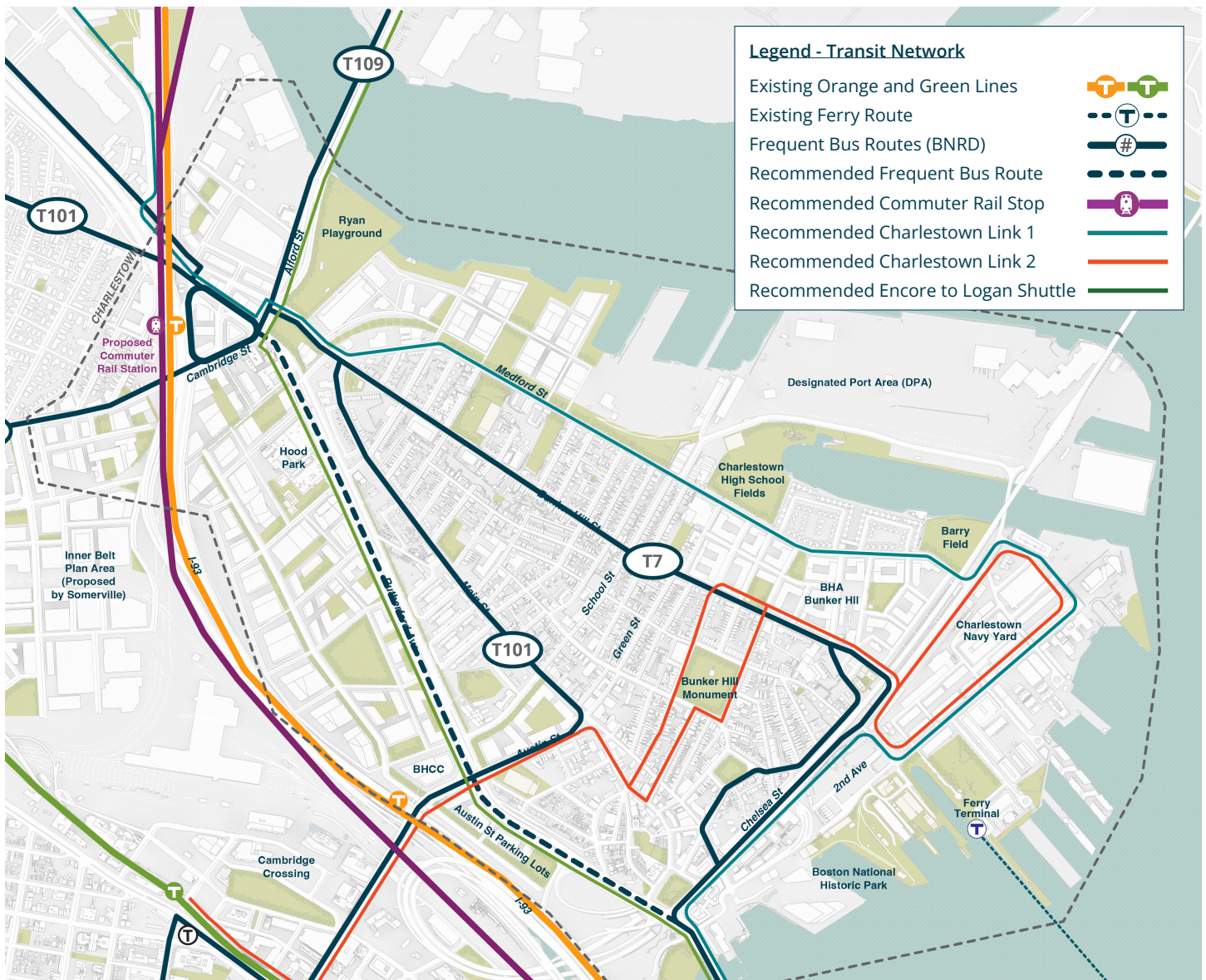


Figure 113

BIKE NETWORK

The proposed bike network for Charlestown outlines a plan for ensuring new development is well-served by high-quality bike lanes, while also recommending modifications to the Original Peninsula and Navy Yard to create a fully connected neighborhood bike network. Within the new developing areas, the bike network anticipates new paths and separated bike lanes to support high rates of biking. Throughout the rest of the neighborhood, the proposed network focuses on responding to existing conditions and constraints with a range of dedicated bike lanes and traffic-calmed streets. Priorities for the bike network include:

- Creating a crosstown routes that serve key community resources
- Establishing the Lower Mystic and Medford Greenway along Medford St
- Creating a Navy Yard Network to relieve pressure on the Harborwalk
- Creating comfortable connections to adjacent neighborhoods and across I-93
- Enabling high rates of biking in areas with new development

Figure 120. Proposed bike network map.

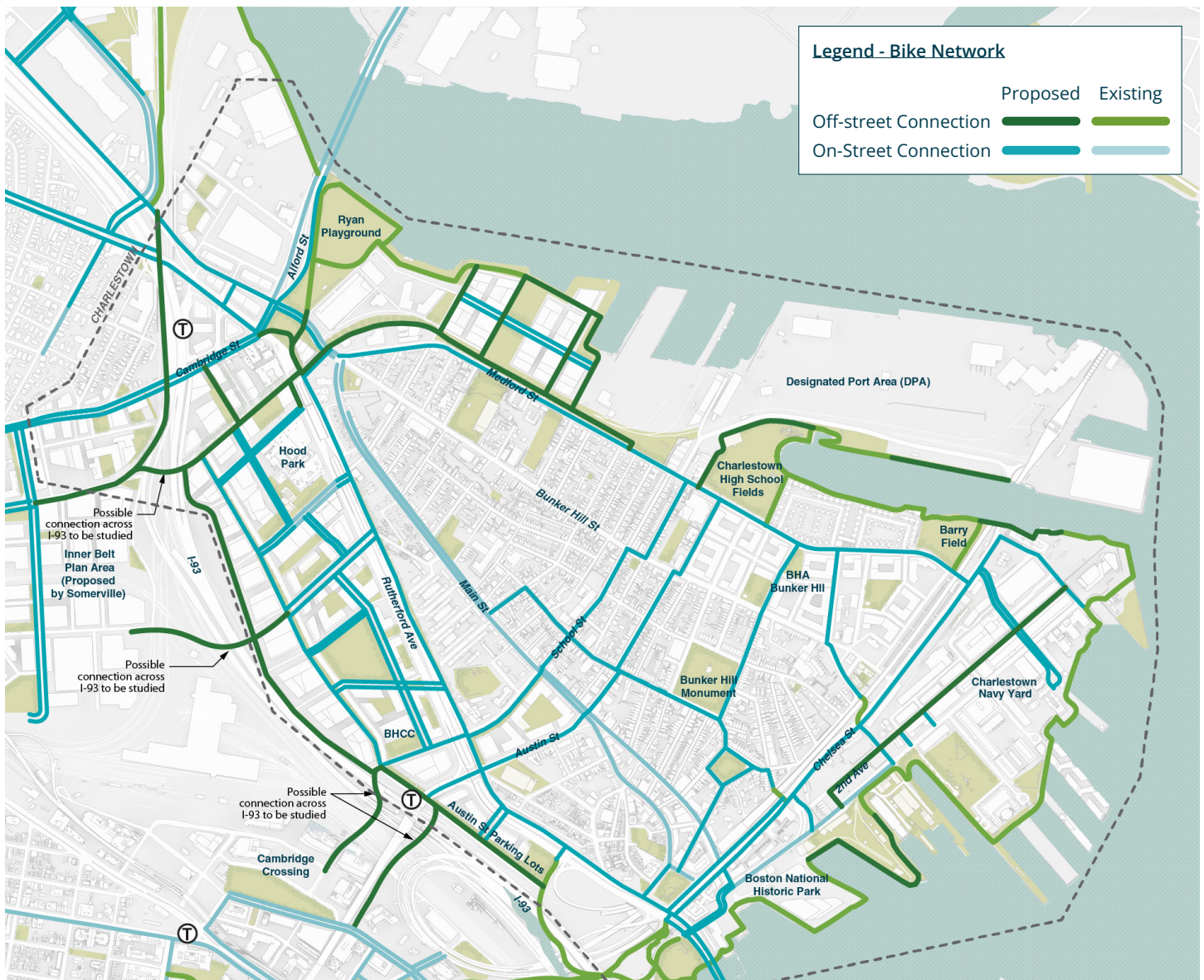


Figure 114

TRANSPORTATION CAPACITY ANALYSIS

To support the development of land use recommendations that are attuned to Charlestown's transportation context, a comprehensive study of future transportation conditions was conducted. This study used an iterative process to:

- 1. Understand** the potential and capacity of Charlestown's transit system and street networks based on already-planned transportation and development projects
- 2. Test** the effect of growth anticipated through PLAN: Charlestown on those transportation systems
- 3. Refine** land use and zoning recommendations to relieve strains on the transportation system
- 4. Recommend** additional investments or changes in the transportation networks to address existing challenges and support future growth

This section provides a summary of the process and findings from the capacity analysis. Full results may be found in Appendix B.

Understanding the Future Transportation Baseline

Understanding transportation conditions 30 years into the future is a complex and imperfect process. Modeling future transportation conditions requires an estimation of the future behavior of hundreds of thousands of individuals all making decisions based on their unique lives. To support this work in Charlestown, a comprehensive transportation model developed in 2019 specifically to understand transportation and development in the Charlestown/Everett/Somerville area was used and modified as the basis for this work.¹²⁰ Built through a collaborative process between multiple municipalities, the Massachusetts Department of Transportation, the MBTA, the Central Transportation Planning Staff, and the Metropolitan Area Planning Council, this model incorporates existing transportation systems (transit networks, streets, etc.), known transportation projects (like the reconstruction of Rutherford Avenue), anticipated development from around the region, and key population and travel characteristic data from the larger region to simulate future demands on the transportation system. With this tool, predictions about future trips can be made including how many trips will be made, where people will travel to and from, what travel mode people will use, and what time of day people will make their trips. Key assumptions built into the baseline model include:

- Growth in jobs and population from approved and planned development in neighboring municipalities¹²¹
- Changes and growth in travel demand from the entire Boston region
- Completion of the Orange Line Transformation, including more frequent trains
- Reconstruction of Rutherford Avenue as a surface-level street

From the baseline model, several lessons were carried forward into the development of land use scenarios. The baseline model showed that even with more riders as a result of regional growth, the Orange Line is expected to have enough capacity to accommodate these new riders, further supporting additional development around Sullivan Square and Community College stations. It also showed that the existing gateways into and out of Charlestown that experience congestion today are expected to be more constrained. Because of this, any new development in the growth areas of Charlestown must use strong transportation demand management tools to emphasize walking, biking, and transit use as preferred options for both residents and workers.

Testing, Refining, and Recommending

With the base model in place, new land use and transportation scenarios for the growth areas in Charlestown were tested. For each, different combinations of

¹²⁰ Planning for Improved Transportation and Mobility in the Sullivan Square Area, Lower Mystic Regional Working Group, 2019.

¹²¹ The model developed by the Lower Mystic Regional Working Group was modified to eliminate growth in Charlestown within the historically-industrial areas so as to isolate development scenarios contemplated through PLAN: Charlestown.

land uses, densities, and transportation were fed into the model as inputs and a range of outputs – including the capacity of the transit and roadway networks at peak travel hours – were produced. As part of this analysis, additional transportation and land use assumptions were incorporated into the model including:

- Implementation of the MBTA's Bus Network Redesign, including three new high-frequency bus routes operating within Charlestown
- Implementation of three new shuttle routes within Charlestown to supplement MBTA service within the Original Peninsula and Navy Yard
- Establishment of a Commuter Rail station at Sullivan Square station
- Trips generated by new development align with the goals of Go Boston 2030, including an increase in the share of trips made by walking, biking, and transit, and reductions in the share of trips made by driving alone¹²²

Initial scenario models demonstrated sufficient capacity on the Orange Line, very high-demand for the new high-frequency bus routes proposed in Charlestown through the MBTA's Bus Network Redesign, and no noticeable increases in vehicle traffic within the Original Peninsula. During peak hours,

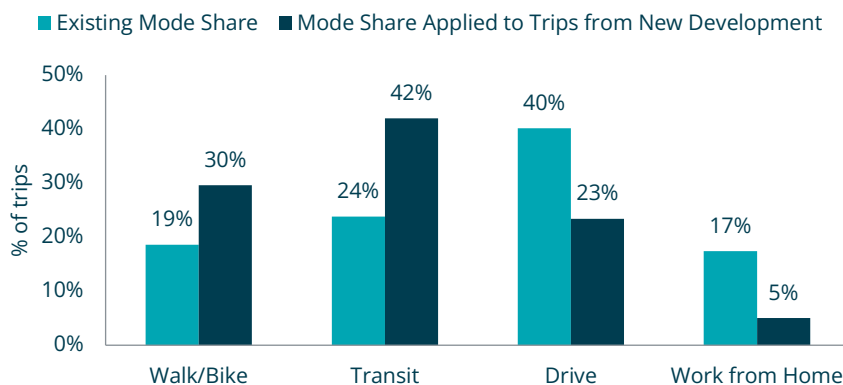


Figure 121

the model estimated that vehicle congestion along some of the gateways into and out of Charlestown would be pushed further over capacity, especially in the afternoon. With these results in hand, the land use – both the mix of uses and total square footage – was revised to alleviate pressure points on the street network. In particular, a 10% reduction in the total square footage planned for the area and a stronger mix of residential uses instead of commercial uses was incorporated into the land use scenario. Without both less square footage and a mix of land uses that encourages more local, non-vehicle trips, the impact of new development on both the transit system and roadway network was generally reduced.

To further support this development, reduce congestion, and ensure new residents and workers have high-quality transportation options, new transportation-network recommendations were also developed and modeled. In particular, additional transit connections, frequency, and capacity is recommended including a Silver Line extension from Everett to Sullivan Square Station, more frequent service on the proposed MBTA Route T7 (along Medford Street), and an entirely new high-frequency transit route operating from Everett along the entire stretch of Rutherford Avenue and into Boston.

¹²² Achieving the ambitious mode share goals of *Go Boston 2030* requires aggressive transportation demand management (TDM) tactics. One of the most successful TDM strategies is restricting available parking. To help deliver new homes, jobs, and destinations in Charlestown without overburdening the street network, PLAN: Charlestown builds on the maximum parking ratios currently enforced by the Boston Transportation Department to reflect both the scale of growth anticipated, major planned investments in transit, and Charlestown's unique roadway constraints. The parking ratios proposed are:

- Residential (Condo): 0.6/unit
- Residential (rental): 0.4/unit
- Retail >5,000 sf: 0.4/1,000 sf
- Retail <5,000 sf: 0.2/1,000 sf
- Hotel: 0.2/room
- Office / Lab: 0.4/1,000 sf
- Institutional: 0.4/1,000 sf
- Industrial: 0.3/2,500 sf

Figure 121. Mode share comparison for existing commutes and planned development in Charlestown bar chart. Existing mode share for commuting trips derived from U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates. The transportation capacity analysis mode share assumptions for work from home trips follows the 2017 goals established in Go Boston 2030, however these trips are likely underestimated based on existing and anticipated trends.

Community Priorities for New Development

Figure 122. Photo of Charlestown Navy Yard. Photo by BPDA staff

With considerable development planned for over the next 30 years, PLAN: Charlestown emphasizes the need for tailored public benefits to mitigate the effects of growth. This summary of priorities outlines a framework for the provision of more goods and services for current and future residents. Public benefits can be in the form of affordable housing, improved infrastructure, or programs and services that benefit the local community, and much more.

When new developments are proposed, Planning staff will evaluate them on the basis of the following elements:

1. Prioritized housing, particularly affordable housing units in excess of City policy
2. Prioritized mixed-use development within 1,000 feet of MBTA stations
3. Developing ground-floor retail, in particular with provisions for affordable commercial rents
4. Promoting adaptive reuse of historic and formerly industrial buildings
5. Creating open space to serve a variety of programs and users
6. Adding publicly accessible multi-use sports fields
7. Developing a green loop
8. Contributing to publicly accessible space along the Mystic River
9. Contributing to the recommended privately-funded shuttle, to augment MBTA service
10. Contributing to the development of a high-quality, continuous bike network



Figure 122

SPOTLIGHT: THE AUSTIN STREET PARKING LOTS

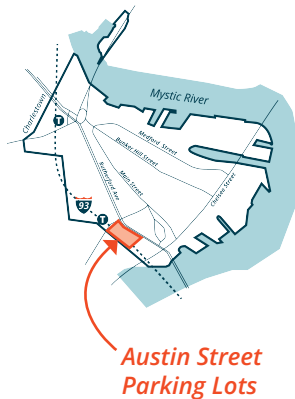


Figure 123

Figure 123. Location of Austin Street parking lots

Figure 124 (p.143). Open Space jam board from a public meeting on October 27, 2023. This jam board is one of four created with residents in break out rooms during the meeting. The other jam boards focused on housing, mobility, and ground floor activation.

Figure 125 (p.143). Options for the future of the Austin Street Parking Lots, from a public meeting on December 13, 2022. These options were presented as concept ideas. Responses to the RFP are not required to follow any of the options presented during the public meeting.

The disposition of the BPDA owned Austin Street Parking Lots is intended to deliver some of PLAN: Charlestown's and the Public Land for Public Good initiative's goals quickly, such as mixed-income housing and community gathering space. The Austin Street Parking Lots total 5.6 acres, and are located to the west of Rutherford Avenue, within the PLAN: Charlestown zoning Study Area. Prior to this PLAN, they were surface parking lots serving the Bunker Hill Community College (BHCC).

KEY GOALS FOR THE AUSTIN STREET PARKING LOTS

Building on the community feedback received throughout the PLAN: Charlestown process, a series of three community meetings identified the following goals for the Austin Street Parking Lots site, which were included in the disposition Request for Proposal (RFP) released on May 4th, 2023:

1. Creating mixed-income housing, including market-rate, workforce, and deeply affordable housing units.
2. Maximizing publicly accessible open space and creating space for sports practice, especially youth soccer.
3. Supporting Charlestown artists, especially musicians in need of rehearsal and performance space.
4. Improving the Austin Street and Rutherford Avenue intersection.
5. Enhancing the public realm and connections to Bunker Hill Community College and the North Bank Bridge within the project site.

TIMELINE AND PROCESS

The Austin Street Parking Lots become a priority for development when three events occurred within a short time frame:

1. The parking lots were highlighted by the Public Land for Public Good initiative as a key site for the development of new mixed-income housing using America Rescue Plan Act (ARPA) funds following the COVID-19 pandemic. The funds must be obligated by December of 2024.
2. BHCC indicated that the college would not need the parking lots in the future, as their campus was initiating its own planning process.
3. The parking lots can deliver on some of PLAN: Charlestown's key developing recommendations, including the provision of housing for all types of families, and creating new open space.

The PLAN: Charlestown Study Area includes the Austin Street Parking Lots and, with each scenario iteration, community feedback was collected on how to leverage the parcels. Three community meetings were then held to inform the writing of a Request for Proposal (RFP). These meetings included the development of options for what could happen on the parcels (figure 125). The RFP, seeking a developer, was issued in May 2023, with responses due July 2023.

The BPDA opened a nominations process in June 2023 to form a Project Review Committee (PRC) comprised of members of the Charlestown community. The PRC will help to evaluate the responses the BPDA receives to the RFP. In September 2023, the BPDA hosted a virtual public meeting whereby responding developers presented their project to the community and answered questions.

ROOM 3 - OPEN SPACE

DISCUSSION QUESTIONS:

1. Who should the open space be for? (ex. Dogs, children, college students, seniors?)
2. What kinds of open spaces should be prioritized for inclusion? (ex. Butterfly gardens? Lacrosse/soccer fields? Playgrounds?)
3. How would you like to see climate resilience incorporated?

Need more open space in general.
Soccer + Lacross fields needed!
And a separate dog only area. -
Debbie

Concerned that there might
not be City or State
resources to maintain parks
here

Need more space for
sportsfields! Maxed out right
now. Soccer and Lacross
especially. Not all 6 acres
needs to be parks - Allen

**NET
CARBON
NEUTRAL!**



Figure 124

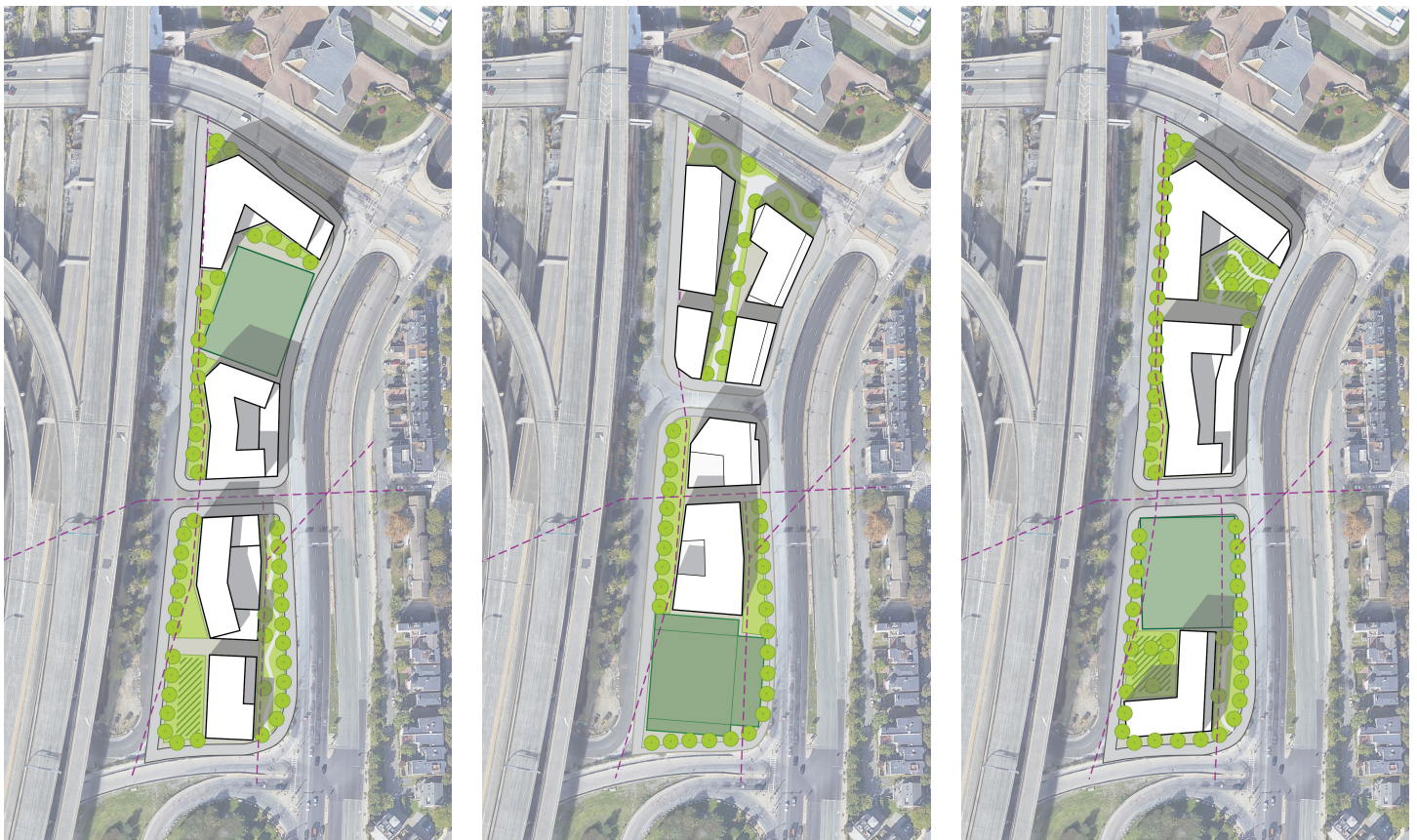


Figure 125

04

URBAN DESIGN GUIDELINES

SULLIVAN SQUARE +
RUTHERFORD AVENUE AREAS

147 | Introduction

148 | Existing Conditions + Vision

150 | Building Design

154 | Adaptive Reuse of Existing Buildings

156 | Connectivity

160 | Open Space + Landscape

162 | Sustainability + Resilience



Figure 126

Introduction

Figure 126 (p.146). Aerial photo of Sullivan Square

Figure 127. Cambridge Street looking towards Sullivan Square. Photo by BPDA staff.

The City of Boston and the BPDA are advancing an equitable, people-centered design vision to future growth and development that leverages the principles of zoning, planning, preservation, and policy to shape Boston's built environment.

USING URBAN DESIGN GUIDELINES

Zoning defines opportunities for land use, as well as building size, form, and site layout, and site features, while design guidelines encourage the creation of a built environment and public realm that correspond to a shared vision. Design guidelines can be more contextual and flexible, allowing for a variety of design approaches. Developers and designers are encouraged to work within the parameters of design guidelines to add vitality to the neighborhood and public realm, add individuality to the streetscape, and enhance connections to the larger community.

Design guidelines are used by developers, property owners, and designers, to inform the decisions they make in the creation of site proposals. The guidelines are then also used by BPDA and City staff, to review development proposals and ensure conformance with the vision laid out through community engagement and planning work.

PLAN: Charlestown has two sets of Urban Design Guidelines. This chapter contains the guidelines for the Rutherford Avenue and Sullivan Square areas, which mostly have industrial uses today. These areas have many large parcels over an acre in size, and have seen several large development proposals in recent years. The focus for the guidelines in this area are to inform new, medium to large scale developments.



Figure 127

Existing Conditions + Vision

Figure 128. Aerial photo of Charlestown looking towards the south from the MBTA bus yard.

Figure 129 (p.149). Photo of Bunker Hill Industrial Drive during PLAN: Charlestown walking tour. April 29, 2023.

Figure 130 (p.149). Cambridge Crossing open space. Photo by BPDA staff.

The Sullivan Square and Rutherford Avenue areas today are mostly industrial. Large, low, masonry and metal buildings are surrounded by surface parking lots and streets without sidewalks or trees. Major infrastructure surrounds the geography, including the elevated Interstate, the MBTA rail lines, the Mystic River, and Rutherford Avenue. These built elements are not compatible with the small, residential fabric of Charlestown's core, but can coexist with larger, mixed-use buildings.

The area holds significant potential to become a real part of the Charlestown neighborhood, with beautiful industrial buildings able to be adaptively reused, plenty of space for new parks and streets, and the best proximity to transit of anywhere in Charlestown. The key to tapping into this potential will be high-quality, thoughtful development that works in partnership with public capital improvements to generate a new public realm for this part of Charlestown.

Charlestown is surrounded by new development located just outside of the neighborhood's borders, some of which provide a model for what could happen in the Sullivan Square and Rutherford Avenue areas in the future. Cambridge Crossing is a development which many Charlestown residents can see in the distance from their homes, and which today occupies land that was once similar to Sullivan Square in built character. The goals of this Chapter is to guide future development to product high-quality additions to the neighborhood, while also being responsive to the aspects of Charlestown that make it unique.



Figure 128



Figure 129



Figure 130

Building Design

GENERAL MASSING AND DIMENSIONS

- Tall buildings with larger bases are encouraged along I-93 to act as a physical buffer from the highway. Buildings and public spaces sited near the interstate, train lines, or other busy roadways should be designed to mitigate the effects of noise, vibrations, and pollution on residents and other sensitive users.
- Stepbacks can serve many purposes: relating to the datums of adjacent buildings, allowing sunlight access for open space and public realm, managing the effects of wind and shadow, and breaking down the scale of large buildings. Stepbacks should be considered above 60 feet to address environmental comfort at the ground level and to create a human-scaled public realm.
- For taller buildings, slender building massing are encouraged in order to preserve sky views and allow sunlight to reach street levels. Avoid building massing that creates tall “walls” or “canyons” along primary street frontages. Taller building elements should incorporate distinctive architectural features and sculpted massing that contribute to an attractive and interesting skyline.

Figure 131. Lot coverage and tower stepback diagram. Applies to Planned Development Area projects and other Article 80 projects as appropriate.

Tower Step Back & Area

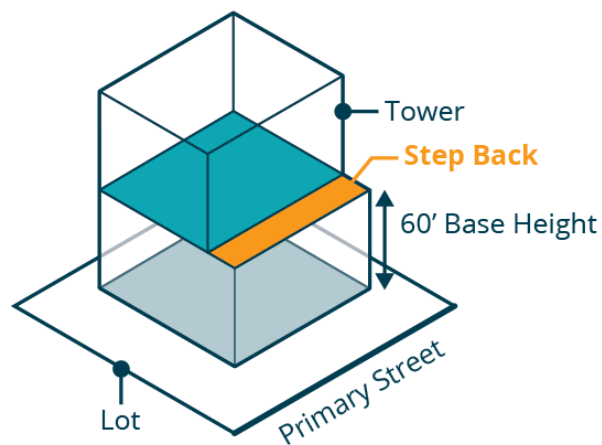


Figure 131

Preserve Views & Sunlight

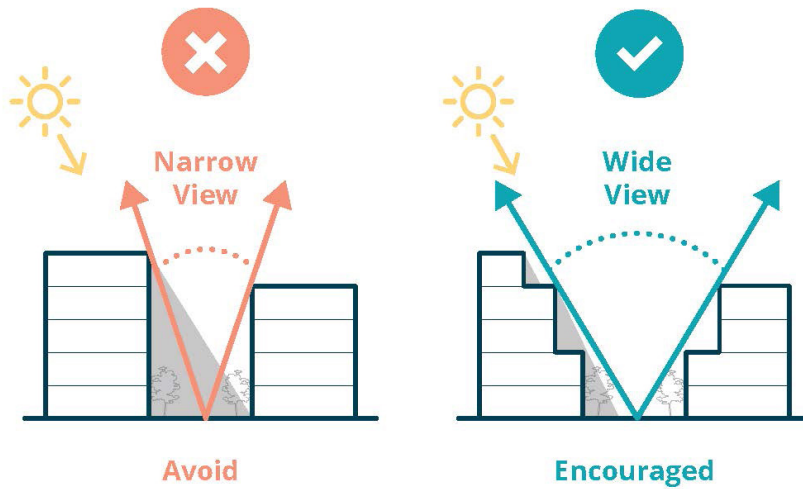


Figure 132

MATERIALITY

- The facade elements, material, and color palettes of buildings near historic neighborhoods should be designed to complement the historic architecture of Charlestown; creative, forward-thinking, and innovative designs that build on Charlestown's heritage are encouraged.
- As a nod to Charlestown's architectural heritage, PLAN: Charlestown strongly encourages incorporating high-quality masonry elements in new construction, particularly on lower floors that define the character of the surrounding streets, sidewalks, and other public spaces. Brick facades must be a minimum of one wythe thick; thin brick or stone veneers or other "faux" finishes are not allowed.
- Utilize cool roofs to help reduce urban heat. Cool roofs employ materials on the roof with high solar reflectance (often using white or other light colors) to reflect heat thereby reducing roof temperatures.¹²³

¹²³ EPA. "Using Cool Roofs to Reduce Heat Islands." EPA: United States Environmental Protection Agency, Updated: May 25, 2023. <https://www.epa.gov/heatislands/using-cool-roofs-reduce-heat-islands>.

Figure 132. Views and sunlight preservation diagram

Figure 133. 32 Cambridge Street, Charlestown. Also known as the Graphic Lofts residential building. Photo by BPDA staff.



Figure 133

Figure 134. Ground floor transparency diagram

Figure 135. Frontage length diagram

STREET LEVEL

- Incorporate high-visibility, transparent storefronts with sidewalk access as much as possible. A minimum of 50% transparency is encouraged.
- Ground-floor uses should be visible and accessible from the primary street frontage. Ground floor retail should include usable street-facing entrances that are kept open during business hours.
- Avoid uninterrupted street frontages longer than 200 feet long. Building frontages longer than 200 feet should include publicly accessible through-block connections, or break up their massing in other ways. Breaking up street-level facades can create visual interest and a human scale; design strategies may include modulated projections and recesses, varied color and material palettes, and maximizing facade transparency.

Ground Floor Transparency

Incorporate high-visibility, transparent storefronts, and sidewalk access as much as possible

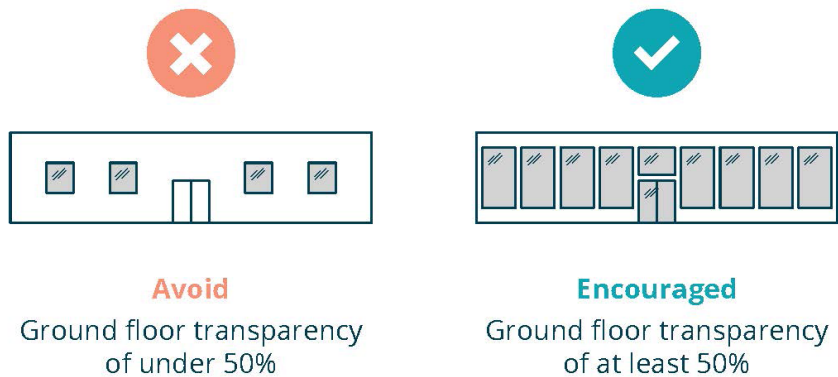


Figure 134

Frontage Length

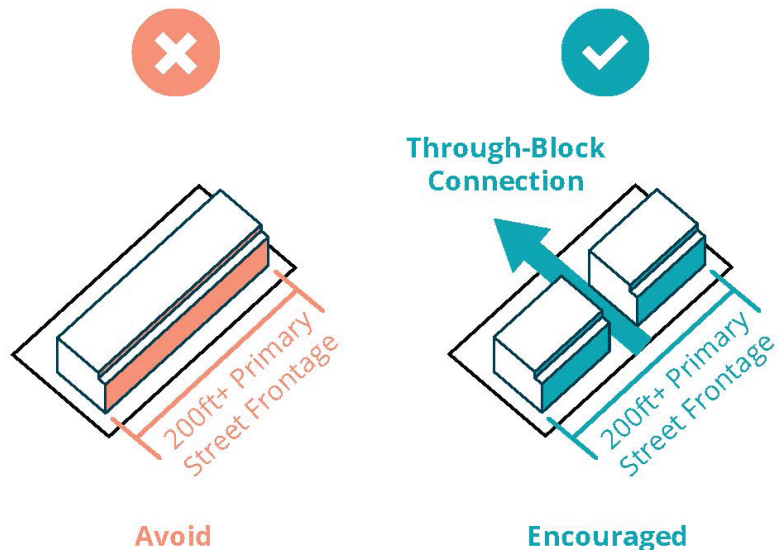


Figure 135

MECHANICALS & UTILITIES

- Mechanical elements of buildings, including rooftop and facade elements, should be visually integrated into the design of the building. The placement and design of mechanical elements should consider the building's appearance from the street, as well as the overall impact on the skyline. Visible penthouses and screening elements should use materials, finishes, colors, and other architectural elements that match or complement the rest of the building.
- Minimize the visual impact of rooftop mechanical elements and penthouses. To the greatest extent possible, these elements should be consolidated, low-height, and set back from the edges of the building.
- Mechanical equipment should be screened from view. Use green roofs, parapet walls, or architectural screening elements.
- When selecting mechanical equipment, prioritize low-noise and low-emission options. Locate equipment in areas that are away from sensitive uses such as residential units or outdoor amenities.
- Mechanical and utility systems for projects located within the Coastal Flood Resilience Overlay District should be protected from flood risk and raised above the design flood elevation when possible.¹²⁴

To preserve and celebrate the industrial legacy of Charlestown, the adaptive reuse of historic industrial and commercial buildings is strongly encouraged. Adaptive reuse should maintain the character and integrity of the building's original design, highlighting key historic architectural features while incorporating

¹²⁴ BPDA, Coastal Flood Resilience Design Guidelines

Figure 136. Rooftop mechanical elements diagram

Rooftop Mechanical Elements

Minimize the visual impact of rooftop mechanical elements and penthouses. To the greatest extent possible, these elements should be consolidated, low-height, and set back from the edges of the building to minimize their visual impact.

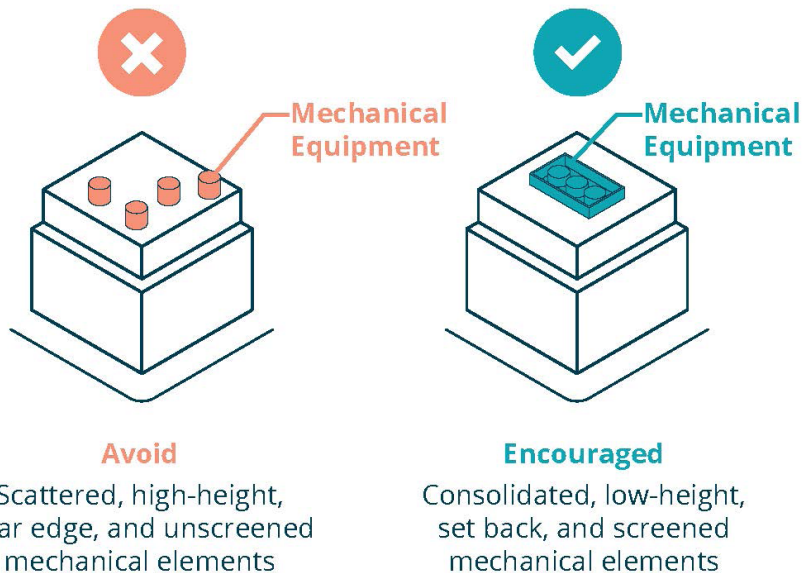


Figure 136

Adaptive Reuse of Existing Buildings

contemporary elements that enhance the building's functionality.

- Respect the scale, massing, and street presence of historic buildings. Building additions and alterations are permissible but should be designed in a way that complements and foregrounds historic elements.
- Use high-quality materials that are compatible with the historic character of the building. If demolition of any portion of the historic building's interior or exterior is necessary, historic materials and architectural elements should be salvaged and reused as much as possible.
- Incorporate sustainable design features that enhance the historic building's performance. For example, outdated and inefficient HVAC, plumbing, and electrical systems may be retrofitted or replaced with new components that help conserve energy and water, improve building safety, and enhance indoor environmental quality. Visible fixtures and other mechanical components should be high-quality, complement the existing historic architecture, and be thoughtfully integrated into the overall building design.
- Ensure that the historic building is accessible to all users by incorporating design features such as ramps, elevators, and accessible restrooms. Accessibility features should be integrated into the overall design as much as possible and should complement the historic character of the original building.
- Refer to the Coastal Flood Resilience Design Guidelines for guidance on retrofitting existing buildings within the Coastal Flood Resilience Overlay District against flooding.
- For more information about best practices for adaptive reuse refer to the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preservation, Rehabilitation, Restoration & Reconstruction of Historic Buildings
- All of Charlestown, from its historic neighborhoods to new developments, should be designed to provide safe, accessible, and beautiful streets for all users—whether getting around on foot, by bike or scooter, by bus and transit, or by car. New development of all types must be planned and designed to

Figure 137. Interior of 32 Cambridge Street. Photo by BPDA Staff.

Figure 138 (p.155). 529 Main Street, also known as Schraffts Center. Photo by BPDA Staff.

Figure 139 (p.155). 50 Terminal Street, Building 1. Photo by BPDA Staff.

Figure 140 (p.155). 523 Medford Street. Photo from Google Earth.

Figure 141 (p.155). 24 Cambridge Street. Photo from Wikipedia.

Figure 142 (p.155). 20 Roland Street. Photo by BPDA Staff.

Figure 143 (p.155). 68 Alford Street, also known as the Whittemore-Wright Tannery Building. Photo by BPDA Staff.



Figure 137



Figure 138



Figure 139



Figure 140



Figure 141



Figure 142



Figure 143

Connectivity

meet the City of Boston's safety, access, and reliability goals as outlined in *Go Boston 2030*.

- All street designs should utilize the Boston Green Infrastructure within Public Rights of Way Guidelines to enhance the health and wellness of the environment.
- All new streets must be designed and built in conformance with the Boston Complete Streets Guidelines and must utilize Boston Transportation Department and Public Works Department standards and specifications. Along existing streets, meeting the required dimensions for sidewalks, separated bike lanes, landscape and furniture zones, and vehicle travel lanes discussed below may require setbacks and public easements on private property. New streets that are built on private property must be established as public ways through the Boston Public Improvement Commission.
- Streets within the Sullivan Square and Rutherford Avenue areas must conform with the streets framework plan in Chapter 3 of this PLAN. Streets within these areas are classified by type based on their planned use. For each street type, dimensional requirements vary.

Figure 144. Sidewalk zones diagram.

SIDEWALKS

- Sidewalk design (including materials, furnishings, slopes, and ramps) must follow all City of Boston accessibility guidelines, including requirements set by CMR 521 and the proposed Public Rights-of-Way Accessibility Guidelines (PROWAG). This includes a minimum of a 5' clear zone with no vertical obstructions with an accessible surface (typically standard concrete). On Main Streets and Major Connectors an 8' curb ramp and tactile warning pad is preferred. All curb ramps on new streets must be directional (not "apex"). Refer to the streets framework in Chapter 3 for a map of street types.
- Crosswalks across Minor Connectors and Alleys should be raised to prioritize pedestrian travel, slow turning vehicles, and provide for a more

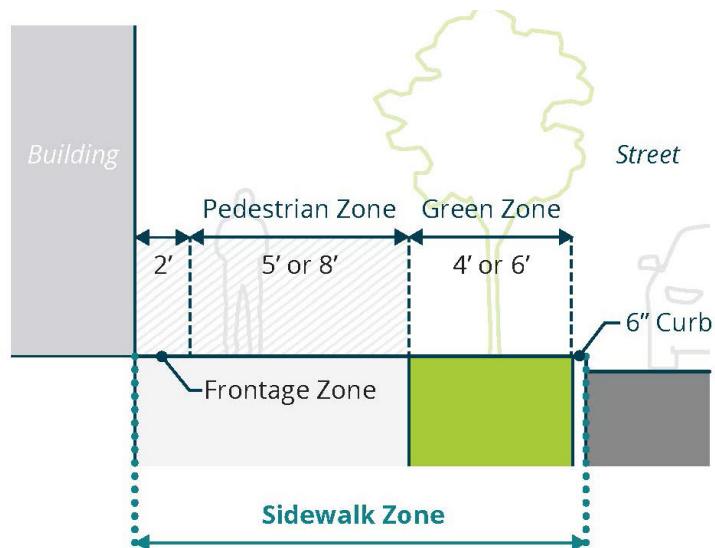


Figure 144

accessible pedestrian network. Refer to the streets framework in the Chapter 3 for a map of street types.

- Tree pits should be included in all newly created sidewalks and must meet or exceed the minimum dimensions recommended by Boston Public Works Department Standard. Street trees should have a minimum 150 cubic feet of soil per tree.
- All street furniture must be located outside of the 5' minimum (8' preferred) clear width. Utilities and street furniture should be aligned within the furnishing zone.

BIKE CONNECTIONS

- In accordance with the framework plan for new streets, all new streets must include bike facilities that support biking by people of all ages and abilities. All separated bike lanes, shared use paths, and traffic calming elements must comply with Boston Transportation Department, Boston Public Works Department, and Boston Disability Commission standards. A minimum dimension of 7.5' clear must be maintained for separated bike lanes to allow for routine maintenance and snow clearance.
- The preferred vertical delineator for separated bike lanes is a constructed buffer with a chamfered curb along both edges. Street-side buffers must be a minimum of two-feet if on-street parking is not present and must be a minimum of 3' if on-street parking is present. Wider buffers are preferred to support vegetation and green infrastructure within the street buffer. All separated bike lanes must have a detectable edge separating the bike lane and the sidewalk and meet accessibility design requirements at crossings. All separated bike lanes must be constructed at street-level.
- New developments must comply with the City of Boston's Bike Parking Guidelines including accommodations for site users and visitors, and support of the bike-share network.

Figure 145. Bike lane street side buffers diagram.

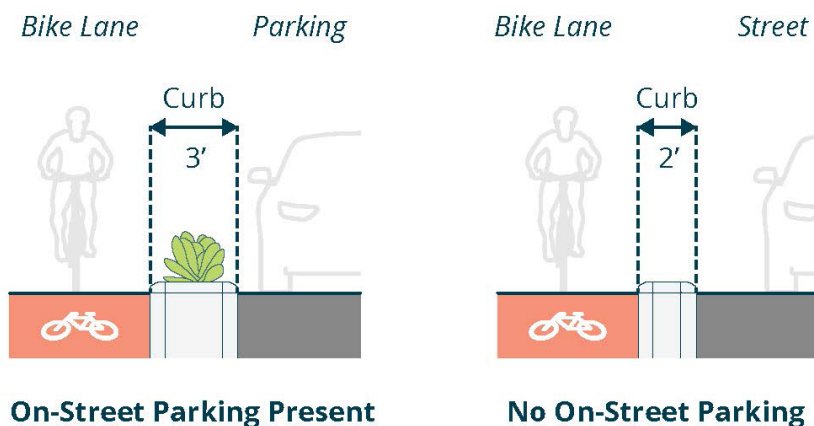


Figure 145

TRANSIT

- All bus and shuttle stops should be designed to be safe, comfortable, and dignified. All bus stops must include basic amenities including a shelter, bench, lighting, trash and recycling receptacles, and real time information systems. All bus stop dimensions must comply with MBTA Bus Stop Design Guidelines.
- Transit stops should be well-integrated with other transportation options. The City of Boston's GoHubs!—also known as mobility hubs—combine bike share, car share, and transit access with public art and information at key intersections or community destinations. GoHubs! offer people more options to get around, meet up, and find their way. Wherever possible, new development should strive to create GoHubs! to contribute to expanded options for residents and visitors.

Figure 146. Main Street bus shelter and separated bike lane in Charlestown. Photo by BPDA staff.

VEHICLE TRAVEL WAYS

- All vehicle travel lanes and travel ways must comply with the street framework provided in Chapter 3.
- Streets should be multi-modal, designed to support transit and non-motorized vehicles, and not dominated by cars.
- The design speed for all new streets shall not exceed 25 mph. Roadways should be designed for slow speeds that reduce the incidence and severity of crashes—particularly crashes involving pedestrians and bicyclists.
- The standard width for vehicle travel lanes on all new streets is 10' wide. If bus routes are present on the street, the preferred width is 11' wide.

ON-STREET PARKING

- Curbside, parallel pick-up/drop-off zones may be included with new development to help passengers move to and from vehicles, particularly ride-hailing services. These zones must be time-restricted for no more than 15 minutes. These areas should be limited to areas with high passenger demand. These zones must be designed and implemented in coordination with the Boston Transportation Department.
- On-street parking is not permitted within 20' of any intersection. Where on-street parking is present, curb extensions are encouraged to enforce no-parking zones near intersections and improve visibility between all travelers.



Figure 146

ACCESS TO GARAGES AND LOADING AREAS

- Driveways and curb cuts must comply with Boston Public Works Department standards and may require approval by the Boston Public Improvement Commission. All driveways and curb cuts must be minimized to prioritize pedestrian accessibility and safety. Residential driveways across streets and public ways serving fewer than 50 parking spaces should be 10' wide and must not exceed 12'. Commercial driveways should be 20' wide and must not exceed 24'. The accessible path of travel must continue at sidewalk grade across the driveway. Unless it is not physically possible, driveways and curb cuts should be located on Service Streets or Accessible Alleys. Driveways should be equipped with an A/V system
- Where physically practical, curb cuts and driveways should be shared across parcels to reduce the total number of curb cuts within the neighborhood. Commercial curb cuts may not be located within 100' of the nearest intersection.
- Motor-courts (off-street parking turn-arounds and drop off areas) are not permitted.
- Surface parking is not permitted. For projects that include on-site parking, below-grade parking is strongly encouraged. Access points to parking and loading areas should be located at the side or rear of buildings, and accessed from side streets, alleys, or least-traveled roadways.
- Loading/unloading zones in new development should be located below grade wherever possible and should be serviced via the same curb cut used for passenger vehicle parking. Loading docks are not permitted along primary street frontages or any frontage that faces residential or ground-floor retail uses. No-idling policies should be enforced for all loading zones near residential or other sensitive uses.
- To promote safety and minimize the physical footprint of loading areas, projects should be serviced by trucks no larger than an SU-30 wherever possible. In no case shall the design or control vehicle for loading areas exceed a WB-40. Truck maneuvers to access loading should be accommodated on site and not rely on back-up maneuvers on streets.
- All projects must comply with the City of Boston's EV Readiness Policy for all new parking.

VISUAL SCREENING

- Above-ground parking structures are strongly discouraged. If used, they must be screened with facade treatments using materials, colors, patterns, and scales that improve visual interest and complement the surrounding urban context. Buildings that front Main Streets and Boulevards may not have ground floor parking visible from the pedestrian zone and must have active ground floor uses.
- Ground-level mechanical areas and trash collection areas should be visually screened with fencing and landscaping.
- All resiliency strategies should respond to district-wide strategies and opportunities.
- Refer to Coastal Resilience Solutions for East Boston and Charlestown Recommendations.

Open Space and Landscape

Figure 147. Open space at Cambridge Crossing. Photo by BPDA staff.

- New development projects should improve the public realm by providing active public and semi-public spaces. Encouraged features include wider sidewalks or plazas, and enhanced landscaping, furniture, lighting, and artwork. Provide opportunities to support ground-floor retail, such as space for outdoor dining and gathering.
- Existing trees should be retained wherever possible, especially mature trees. If existing trees are removed, they must be replaced by new trees at a one-to-one caliper basis removed. Caliper is the diameter of the primary tree trunk in inches, typically measured at 4.5 feet above the ground. New trees shall be at least 3 inch caliper.
- All open spaces and their programming should accommodate users of all ages and abilities.
- Consider open space access and security. Design open spaces with clear and safe physical access from surrounding streets and sidewalks. Maintain visual access and security from public ways.
- All open spaces must include vegetation and tree canopy that provides comfort (such as shade and windbreaks), visual interest, and biodiversity in all seasons.
- Open space should be buffered from high traffic roadways, such as Interstate 93.
- Development Parcels: With the proposed development of new residential, retail, commercial, and life sciences programming, open space should be included on site. Open Space and Landscape areas are critical in supporting active and passive recreation, promoting stormwater infiltration, reducing urban heat, and creating habitat. Generally, for mid-rise, high-rise, and commercial, 15% minimum open space should be targeted. Sidewalks and circulation areas, parking, and mechanical areas do not contribute to the 15% minimum requirement for Open Space and Landscape.



Figure 147



Figure 148

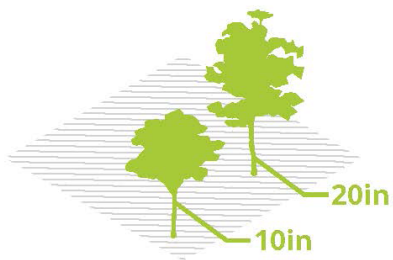
Tree Replacement

If existing **trees** are removed, they must be replaced by new **trees** at a one-to-one ratio per caliper inch removed. New trees shall be at least 3 inch caliper (a measure of trunk diameter).

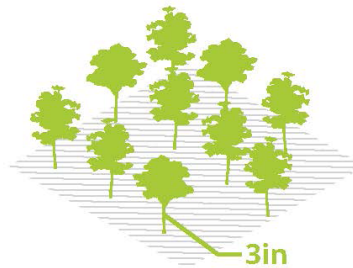
Example:

These two trees are a combined 30 caliper inches. If removed...

You must plant a total of 30 caliper inches of new trees. For example:



1x 10 inch caliper tree
+ 1x 20 inch caliper tree
= **30 Caliper Inches**



10x 3 inch caliper trees
= **30 Caliper Inches**

Figure 148. The Training Field in Charlestown. Photo by BPDA staff.

Figure 149. Tree replacement diagram.

Figure 149

Sustainability + Resilience

Figure 150 (p.163). CFROD Design Guidelines Diagram. Boston Planning and Development Agency. Coastal Flood Resilience Overlay District Design Guidelines. p78. <https://www.bostonplans.org/getattachment/d1114318-1b95-487c-bc36-682f8594e8b2>

- Refer to Boston Urban Forest Plan: Charlestown Neighborhood for recommendations on priority zones for tree planting, species selection, and installation recommendations.
- Refer to Heat Resilient Solutions for Boston. Charlestown experiences hotter and longer heat events than the city median. Resiliency efforts should pursue opportunities to reduce heat exposure and heat retention in and around buildings. Strategies should include the use of higher albedo building and paving materials and increased shade areas through landscaping, expanded tree canopy, cooling center and green roofs.
- Projects should strive for zero carbon or positive energy performance. New buildings should be designed as low-energy structures with an enhanced envelope and efficient systems that include on-site renewable energy and identifies off-site renewable assets, credits, or certificates sufficient for achieving zero carbon emissions.
- Areas of Charlestown within the Coastal Flood Resilience Overlay District may be subject to future coastal flooding until key flood pathways are cut off. Refer to the Coastal Flood Resilience Design Guidelines for design guidance on all projects located within the overlay district. Where possible, architecturally integrated resilience strategies should be prioritized.
- Coastal Resilience Solutions will be evaluated for their: effectiveness, feasibility, design life + adaptability, social impact, equity, value creation, and environmental impact. Coastal resiliency initiatives should seek to improve flood protection, waterfront access, mobility and open space.
- Resiliency strategies should preserve the function and historic character while undoing the unjust patterns of historic planning that places certain communities at risk of environmental hazard.
- Sustainability strategies shall incorporate energy conservation measures that decrease energy cost burdens and promote health and wellness strategies for residents. Such measures include; all electric buildings, geothermal, photovoltaics, energy recovery / heat exchange, battery energy storage, and grid interactive technologies.
- Resiliency strategies should include lighting design, as poor selection and application can adversely affect marine life, flora, and fauna.

See also:

- 2019 Carbon Free Boston
- Boston Zoning Code Article 37: Green Buildings and Climate Resiliency Guidelines
- Smart Utilities Program and Policy for Article 80 Review
- Boston Zoning Code Article 25A: Coastal Flood Resilience Overlay District
- Boston Green Infrastructure within Public Rights of Way Guidelines.

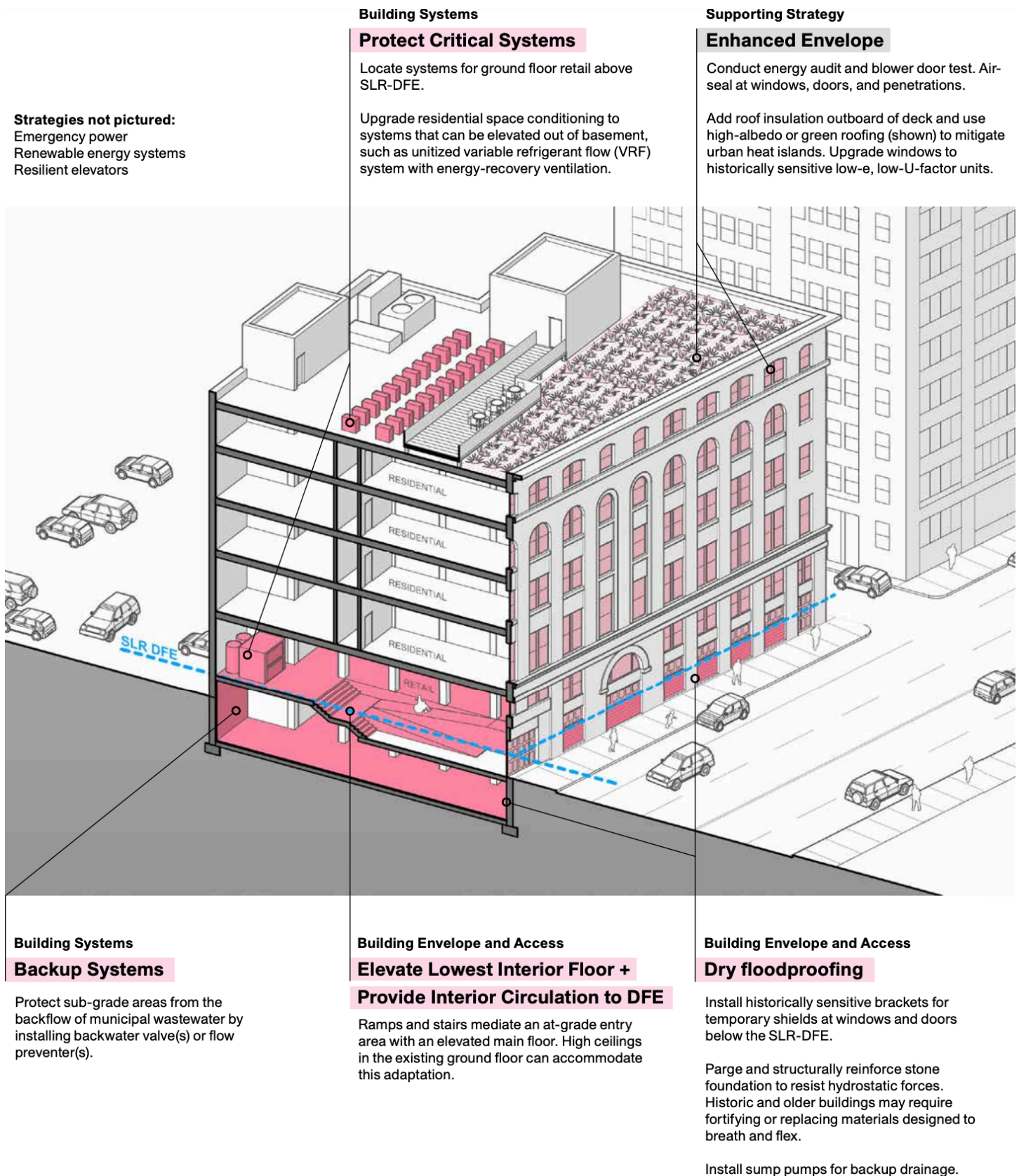


Figure 150

05

URBAN DESIGN GUIDELINES

**ORIGINAL PENINSULA +
LOST VILLAGE AREAS**

167 | **Introduction**
Using design guidelines; Design Overlay Districts

170 | **All Proposals**
Applies to infill development, additions, facade alterations, and public realm improvements

178 | **Infill Development**
Development on vacant parcels or parcels where existing structures are demolished

180 | **Additions**
New dormers, extensions, addition of new stories, etc.

184 | **Facade Alterations**

186 | **Public Realm**
The public space: streets, sidewalks, and parks

190 | **Demolition**
Arguments for alternatives

191 | **Zoning to Support Design**



Figure 151

Introduction

¹²⁵ Boston Redevelopment Authority. *Revitalizing Older Houses in Charlestown*. Boston, MA: Boston Redevelopment Authority, 1972.

Figure 151 (p.166). Map of historically residential areas of Charlestown. Areas identified by community members as a priority for preservation.

Charlestown's historically residential areas have a distinct character due to a complex history, an ascending topography that crests at the Bunker Hill Monument, and a community that cares deeply for the neighborhood. A dense fabric of homes rise along the neighborhood's hillsides in the Original Peninsula and Lost Village areas (figure 151). The style and form of these homes mark the periods in which they were built: late Georgian clapboard housing of the 1780s; the Federal-style wood and masonry homes of the early 1800s; the Greek Revival-style homes of the 1830s and 1840s; and the Gothic Revival, Italianate, Second Empire, Romanesque Revival, Queen Anne, and Georgian Revival styles, all of which had their decades and overlaps from the 1840s to the 1920s.¹²⁵ Following these decades was the urban renewal period of the 1960s. All of these styles and typologies have created the residential fabric of Charlestown that is beloved by residents today, and which will require care to retain.

While street design and zoning shape the underlying structure of neighborhoods, urban design guidelines reinforce the elements of built forms that residents value most. The guidelines in this section are specific to the historically residential areas of Charlestown's Original Peninsula and Lost Village (figure 151). However, preservation cannot be accomplished with design guidelines alone. They do not designate historic landmarks and have no ability to halt demolition. For additional information on the work necessary to ensure the preservation of Charlestown's historic assets, please refer to the Preservation section of the Needs Analysis chapter of this plan.

WHAT ARE DESIGN GUIDELINES?

Design guidelines ensure that new development and additions are compatible with the established massing and character of neighborhood residential areas, while still allowing for creative design opportunities. These design guidelines:

- Guide projects toward forms that are appropriate to the neighborhood context and city's climate and urban environment
- Encourage buildings that are designed to be sustainable and efficient
- Promote safe, functional, and high-quality living environments
- Offer a series of spatial strategies and formal components that address Charlestown's most common design challenges in the Original Peninsula and Lost Village areas
- Facilitate a consistent process for neighborhood design review

USING THE DESIGN GUIDELINES

Property owners, developers, designers, and contractors proposing a residential project or a project which affects any residential buildings in Charlestown's Original Peninsula or Lost Village should first review the zoning of the property where the proposal is located to understand what is allowed. Following this, proponents should review these Design Guidelines.

The first section of the Design Guidelines, 'All Proposals', should be reviewed by all proponents. It describes desired design qualities and best practices for any small-scale residential project in the historic parts of the neighborhood. The sections that follow describe design qualities and best practices for specific types of proposals, including infill developments, additions, facade alterations, and public realm projects. Proponents should refer to all of the sections that apply to their proposals.

BPDA design review staff will use these design guidelines during the design review process.¹²⁶ BPDA design review is typically required of projects that receive zoning relief from the Zoning Board of Appeals (ZBA) and receive a proviso requiring design review, or for those proposals which fall within a Neighborhood Design Overlay District (NDOD), described in the next section. Proponents should demonstrate that any alternative solutions to the design guidelines are equal to or better than what is recommended here.

NEIGHBORHOOD DESIGN OVERLAY DISTRICT

Charlestown's Neighborhood Design Overlay Districts (NDOD) were established by Article 62 of Boston's zoning ordinance (figure 152).¹²⁷ The intent of the overlay is to protect the existing quality of the pedestrian environment, character of the residential neighborhoods, and concentrations of historic buildings within the district. The NDOD is represented as a layer in the City of Boston's [Zoning Viewer](#), where you can look up parcels by their street address to see any applicable zoning overlays. Design review for projects on properties in the NDOD is performed by BPDA Urban Design staff, and is triggered when one or more of the following conditions are met by a proposed project:

Per Article 80E-2.1 (b)(iii): Design review has been triggered due to one or more of the following:

- Change in roof shape, cornice line, street wall height, or building height of an existing building;
- Erection/extension of a building > 300 or more sf.;
- Change in building massing or size/location of door or window openings, where such alteration affects three hundred (300) or more square feet of exterior wall area, or a smaller exterior wall area if expressly provided in the underlying zoning.

Where there is an overlapping landmark district or designation, the NDOD review does not apply, and design review is instead performed by the Boston Landmarks Commission. Consequently, ZBA requests should be mindful of these scenarios. The NDOD review is intended to provide a level of protection to the character of the district, and is often less protective than landmarks status, and does not have the ability to prevent demolition. Additionally, where proposed projects are not visible from the public right-of-way (streets, sidewalks, parks, etc), NDOD design review also not apply.

¹²⁶ BPDA, ZBA-BPDA Design Review

¹²⁷ Boston, MA, Zoning Code, Zoning Ordinances, Article 62, Section 19.

Figure 152 (p.169). Map of Charlestown's Neighborhood Design Overlay District(s). Based on Map 2E of the Boston Zoning Code.



Figure 152

All Proposals

All property owners, designers, and contractors proposing a residential project or a project which affects a residential building in Charlestown's Original Peninsula or Lost Village should refer first to this section, then to the following sections with more specific guidance based on the type of proposal: Infill development, additions, facade alterations, public realm improvements, and/or demolition.

The guidelines below are organized by topic, including massing, specific building features like roof decks and dormers, materiality, sustainability, landscape, and utilities.

CONTEXTUALIZE MASSING

- If a proposed building is larger than typical buildings in the area, the massing must be composed in a manner that maintains regularity with or complements its neighbors. Consider the use of setbacks and step-backs to realize this requirement.
- Avoid building over the public-right-of-way. Projections over the sidewalk should be limited to orioles or bays. Large projections and cantilevers that overhang the first floor and are visible from the street should be limited and, when introduced, should be composed as special building features that relate to building elements found in the area.
- Avoid partially covered parking. From a design perspective, if there is parking in a project, it should be integrated into the overall design early on. This is intended to help minimize the impact of parking on the neighborhood and to create legal pathways for rightsizing the parking supply.

MASSING VARIATION

- Create visual depth and modulation through the use of stepbacks and pitched-roofs when appropriate, such as to match an existing datum line or neighboring stepback.
- Decks, porches, and balconies may be located at the rear face of a building. Choose materials that complement the facade. The material and spacing of railing and railing supports should not overwhelm the building facade. Projecting porches may be screened, but permanent enclosures are prohibited.
- Scale bay windows according to the rest of the building design and the surrounding context. Avoid terminating oriels in flat, horizontal lines or adding balconies above them.

DESIGN BASED ON CONTEXT, NOT ARCHITECTURAL STYLE

- The facade of a building should balance its own unique expression with the cohesive visual experience of the entire block.
- The building facade may be articulated through the use of materials, architectural trim, window moldings, and other architectural features as appropriate.
- If a building is located on a corner, consider massing variations and fenestration patterns to give character to the street-facing facade without the primary entrance.

ROOF DECKS

- Roof decks are only permitted on flat roofs.
- Roof decks should be located in the rear of the rooftop footprint in such a way that they reduce visibility from the public right-of-way, and be offset a minimum of 5'-0" from all roof edges.
- Railing materials should be durable and of a high quality, and not visible from the public right-of-way. Black metal is preferred.



Figure 153

Figure 153. Photo of 413 Main Street in Charlestown. Photo by BPDA Staff.

Figure 154. Photo of 452-465 Main Street in Charlestown. Photo by BPDA Staff.



Figure 154



Figure 155

Although painted brick goes against the urban design guidelines, in instances where features 'break' design guidelines but also contribute to neighborhood character (like this painted foundation wall) exceptions can be made.



Figure 156

Stone veneer (not allowed)



Figure 157

Painted and unpainted brick (not allowed and allowed respectively)

DORMERS

- Where there are multiple dormers, align the dormers that are on the same story and size them consistently.
- Gable dormers at front elevations are strongly preferred over other dormer types. Existing (historic) dormers should be retained rather than replaced.
- Hold dormer edges back from the sides of the roof and down from the roof ridge line.
- Shed dormers should have a minimum roof slope of 3.5-to-12 wherever possible.

MATERIALS

- Exterior materials should be durable and of a high quality. Well-chosen materials can reduce the need for future maintenance and help the project become a long-lasting addition to the neighborhood. Consider the environmental impacts of materials, as well as their durability and long-term maintenance costs. For example, vinyl siding is not biodegradable and often ends up in landfills. For these reasons, avoid the use of vinyl siding and shingles, thin-brick, and EIFS in favor of wood, fiber-cement, full-wythe brick, and traditional hard-coat stucco.
- Use material colors and proportions that complement each other and highlight the building massing.
- Treat side and rear elevations in a similar way to the front facade.
- If located in the Coastal Flood Resilience Overlay District (CFROD), use flood-proof or flood-resilient materials, like masonry, especially at the ground level (figure 158). Refer to the Coastal Flood Resilience Design Guidelines for more information.
- Brick should be 1-wythe thick minimum. Thin brick will not be allowed. Brick row houses in Charlestown use a uniform deep red brick that is typically matched across neighbors. Brick color, texture, size, and bond should match existing brick on the structure and/or adjacent homes, if applicable. Brick should not be painted.
- For clapboard or shingle sided houses, wood is the preferable material for both siding and trim. Fiber cement siding and trim is allowed, but should not be used where adding to or altering existing structures with wood siding. Vinyl and aluminum siding and trim are not allowed. Where properties already have vinyl siding, originally materials sometimes remain underneath. Owners are encouraged to explore and, if possible, re-expose and repair original siding where it still exists.
- Because of environmental impact, health impact, and durability concerns, asphalt, asbestos, artificial stone, and stone veneers are not allowed.
- Stucco is not a material typically used in Charlestown. Where it is used, it should be traditional hard-coat stucco only.

WINDOWS

- Use materials and window treatments that are of a high quality and complement the exterior cladding of the facade. Materials choices such as wood-framed clad windows clad and double- or triple-paned glass can improve building performance and lower operating and maintenance costs. In general, preserving historic windows is encouraged.
- Align windows on the same facade vertically and horizontally.
- Locate windows to balance interior privacy with access to light and air. On building elevations adjacent to other structures, consider the sight lines into and views out of the building.

Figure 155 (p.172). Photo of the foundation wall of 341 Bunker Hill Street in Charlestown. Photo by BPDA Staff.

Figure 156 (p.172). Photo of an unrecorded address in Charlestown. Photo by BPDA Staff.

Figure 157 (p.172). Photo of 339 and 341 Bunker Hill Street in Charlestown. Photo by BPDA Staff.

DOORS

- Considering the environmental impacts of materials, metal or vinyl doors will not be allowed. All doors should be wood. Fiberglass doors may be considered as long as the detailing and finish matches wood doors and has a painted finish.
- All doors facing the street should have translucent panels.
- Provide good lighting at entries.

SUSTAINABILITY AND RESILIENCE

- Dark-colored, impervious surfaces contribute to the heat island effect. For new or re-finished driveways, use light-colored and/or permeable surfaces such as pervious concrete, paving stones, or open-grid pavers wherever possible.
- Maximize permeable surfaces throughout the site through the inclusion of ground-level plantings, green walls, and pervious surfaces such as open grid pavers. Permeable surfaces help to reduce the quantity of storm water runoff and non-point source pollution into the sewer system and maximize infiltration to groundwater.
- New projects should look for creative ways to preserve any existing structures. The construction of new buildings depletes limited natural resources, contributes to pollution, and uses excessive amounts of energy.
- Incorporate sustainable materials into projects, considering material life-cycle, environmental impact, sourcing and replenishment, and recycling potential.
- If located in the Coastal Flood Resilience Overlay District (CFROD), elevate the lowest interior floor height to the Design Flood Elevation (figure 158). Do not locate residential use space (other than building access, parking, or storage), or critical building infrastructure below the Design Flood Elevation. For specific guidance, refer to the Coastal Flood Resilience Zoning Overlay District Design Guidelines.¹²⁸

¹²⁸ BPDA, Coastal Flood Resilience Design Guidelines

TREE PRESERVATION AND PLANTING

- Preserve existing on-site trees wherever possible and maximize opportunities to add new trees. When an existing mature tree must be removed, consider replacing with a new tree elsewhere on site on a caliper-for-caliper basis.
- Consider utilizing a diverse mix of native plantings varying in species, heights, and seasonal interest. If located within the Coastal Flood Resilience Overlay District (CFROD), utilize salt water tolerant plant species.
- Permeable surfaces help to reduce the quantity of storm water runoff and non-point source pollution into the sewer system and maximize infiltration to groundwater. Maximize permeable surfaces throughout the site through the inclusion of ground-level plantings, green walls, and pervious surfaces such as open grid pavers.
- Irrigate landscape elements with collected storm or gray water, to reduce strain on the municipal water supply as well as maintenance costs.
- Existing street trees within the public right of way are to be protected and retained. Building, building protrusions, and construction shall not negatively impact the existing street tree, critical root zone, nor impede the healthy growth of the tree's canopy.

OPEN SPACE

- Open space creates light, air, and views, all of which improve quality of life for inhabitants and their neighbors. Portions of the site that are dedicated to parking, vehicle maneuvering, or are not open to the sky are not considered open space.
- Size and locate ground-floor outdoor amenities such as patios and gardens so that they are easily accessible by occupants.
- Open space siting and the location of landscaping and planting should be guided by environmental analysis that considers advantageous sun exposure, shadow impacts, and compatibility with adjacent uses, as well as environmental benefits, in a manner consistent with underlying zoning.
- Where possible, provide a mix of shaded and non-shaded open spaces on-site, and consider how orientation and material choice can create opportunities for passive heating or cooling strategies.
- For shared outdoor amenities, provide an unobstructed area that may be used for seating when possible.
- Balconies, terraces, accessible rooftops, green roofs, and other means of providing above-grade amenities are encouraged, as forms of usable open space for its building occupants.

Figure 158. Map of the Coastal Flood Resilience Overlay District (CFROD) in Charlestown.

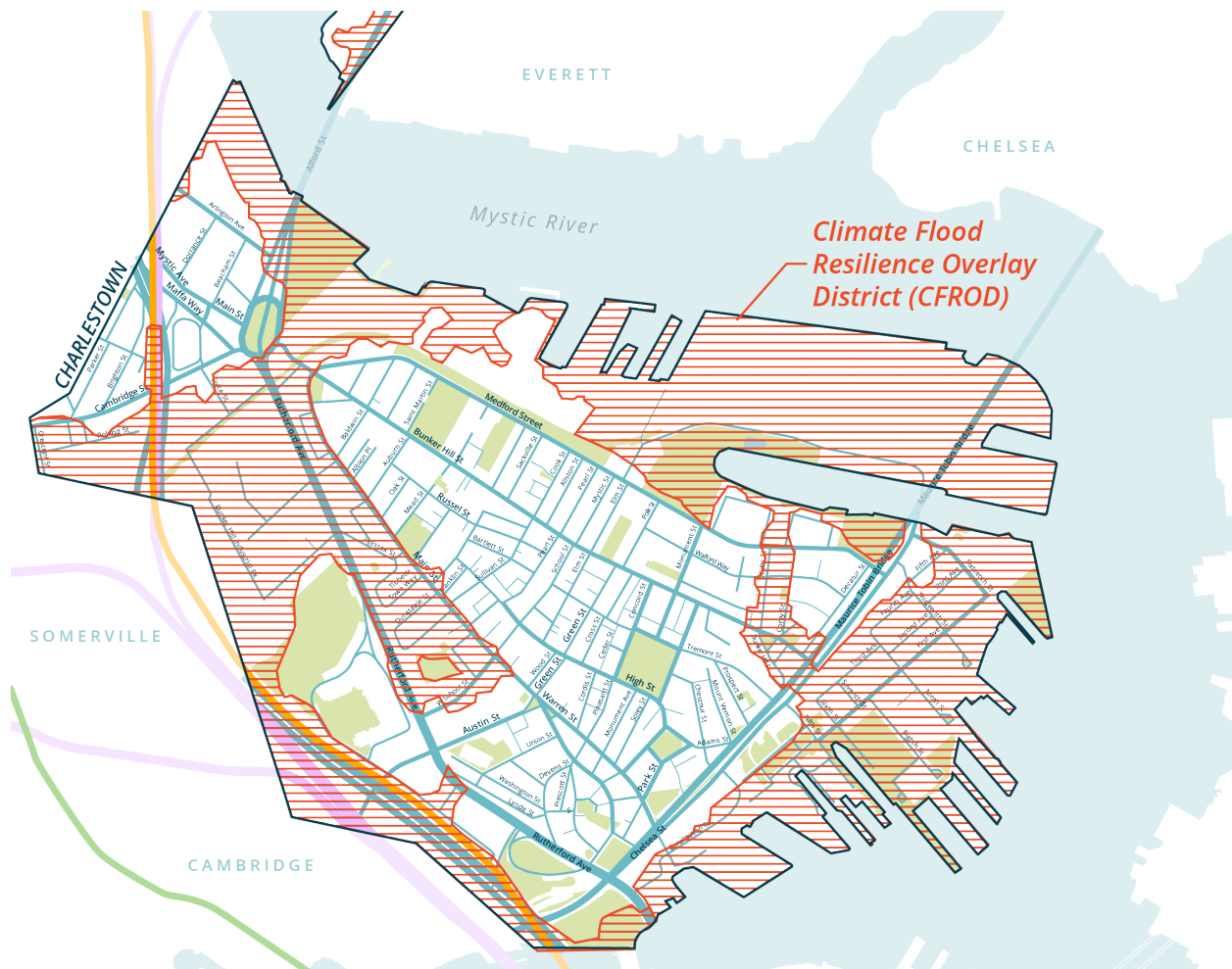


Figure 158

Figure 159 (p.177). Photo of an unrecorded address in Charlestown. Photo by BPDA staff.

Figure 160 (p.177). Photo of an unrecorded address in Charlestown. Photo by BPDA staff.

OFF-STREET PARKING AND GARAGE DOORS

- Creating new curb cuts should be avoided.
- Limit curb cut and driveway width to no more than ten (10) feet. The design of driveways should provide a continuous and level Pedestrian Zone across the vehicular path and encourage vehicles to yield to pedestrians on the sidewalk.
- Design curb cut edges to standards set by the Public Works Department. For specific guidance, refer to the dimensional guidelines in the Public Works Standard Detail for Residential Driveways.
- Garage doors should not face streets or form the street wall. Where garage doors are visible to the public-right-of-way, materials should be high quality. Metal and vinyl are to be avoided; wood is an ideal material; fiberglass may be considered, but detailing should match wood doors and have a painted finish. All garage doors facing the street should include translucent panels.

MECHANICALS AND TRANSFORMERS

- While necessary for the functioning and maintenance of a building, utility and mechanical elements can have a significant sound impact and are often visually unappealing and their location should be carefully considered.
- Transformer and switchgear locations shall be considered early in conceptual site design.
- Do not locate utility systems or mechanical elements in front yards. HVAC compressors, gas meters, electric meters, generators, switchgear, and transformers located in side yards, rear yards, and on roofs should be screened from public view. While on additions and renovations this may be more difficult, new construction should be designed with this in mind from the onset.
- Landscape screening (plantings / fencing) shall not interfere with the equipment and allow proper access for maintenance. Plant selections should be drought tolerant and have root systems that do not interfere with required equipment.
- Direct all mechanical vents through the roof or rear wall, and design them so that their appearance is minimized where possible.
- In the Coastal Flood Resilience Overlay District (CFROD), locate critical systems above the Design Flood Elevation, such as on a roof or higher interior floor. Use backup systems and flood mitigation systems such as sump pumps and back-flow preventers.



Figure 159

Garage doors at the sidewalk create a 'dead' street edge and can make walking along the sidewalk dangerous due to vehicle crossing



Where garage doors cannot be avoided, they should minimize the width of the door and include translucent panels.

Figure 160

Infill Development

Figure 161 (p.179). 4 Soley Street, Charlestown. Photo by BPDA staff.

New construction in the Original Peninsula and the Lost Village should be consistent in scale and design, so that it complements and adds to the existing neighborhood. When feasible, new projects should look for creative ways to preserve any existing structures, but when a parcel is undeveloped or necessitates new construction, refer to this section. This section should only be considered as a supplement to the earlier 'All Proposals' section.

CONTEXTUALIZE MASSING

- New buildings should be of a similar scale and form to those found on the same block. While much of a building's mass or physical volume comes from dimensions controlled by zoning, these guidelines can steer the composition of that massing to ensure that new projects fit in with the built form of the neighborhood.

HEIGHT

- In addition to complying with the zoning code, the height of proposals should be informed by the built context, considering the height of buildings on both sides of all adjacent streets.

FRONT YARD SETBACK

- In addition to complying with the zoning code, front yard setbacks should be contextual. If the majority of buildings on the street or block have a certain setback, the proposal's front yard setback should match it. If the front yard setback varies greatly along the block, the proposal should consider matching one or both of the buildings that are adjacent to it. Front yard setbacks should allow for an 8'-0" minimum sidewalk, which includes a 5'-0" minimum accessible path of travel as well as 3'-0" for curb and street trees. Please refer to the Public Realm section of this chapter for more information.

ROOF

- Appropriate roof forms include gable (either side or front facing depending upon the immediate context) and flat.

SUSTAINABILITY

- Projects should consider meeting LEED and passive house standards.
- New buildings should be planned, developed, and managed to optimize renewable electricity output and meet new on-site solar energy system(s) installation targets.

4 Soley Street is a positive example of infill development design, using high quality materials, designed to a contextual height, and reinterpreting classic elements like bay windows.



Figure 161

Additions

This section should only be considered as a supplement to the earlier 'All Proposals' section.

MASSING VARIATION

- When designing an addition, consider whether it should read as an extension of the existing massing or as a secondary building element.
- Most frequently, additions are smaller in scale than the existing structure. In these cases, it may be appropriate to design the addition using similar materials, proportions, and details as the original structure.
- Where the proposed addition is of a substantial scale, consider using material and massing differentiation to break down the scale. Take care to design the addition so that it does not overwhelm the existing building or the scale of the neighborhood.

HISTORIC SIGNIFICANCE

- If the existing structure is historically significant, delineate between the old and new through changes in plane, material, and/or height; but not necessarily architectural character. Consider how the addition could be considered a modern day 'interpretation' of the historic building techniques and materials, rather than a replication.
- Where portions of the existing structure are historically significant, additions should work with those historic elements, rather than demolishing and replacing them. Consider how the historic elements can be left preserved and enhanced. New elements should harmonize with historical elements.
- Additions should not conceal or alter historically significant building elements.
- Additions should avoid changes to street-facing elevations and should minimize new openings in historic facades, in order to retain as much of the historic materials as possible.

MATERIALS

- Where the existing structure is historically significant, delineate between the old and new through changes in material, while complimenting the original structure's materials and color palette. Consider using materials and colors which compliment those of the original structure.
- Historic brick and mortar patterns are difficult to replicate using modern building materials. Approach additions clad in brick carefully, or choose an alternate, complementary material such as wood clapboards.

WINDOWS

- Window sizes, pattern, and spacing in additions should be considered in relation to alignment of the existing windows.

DOORS

- Where existing, maintain recessed doorways with steps. This is a common entry form in Charlestown and should be preserved. Avoid screening off recessed entry with new doors at the street.



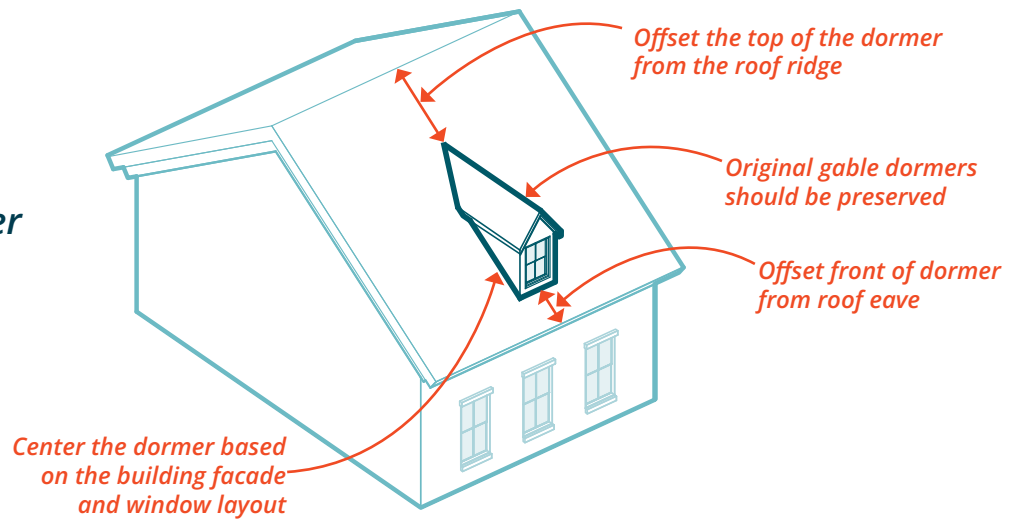
Figure 162. 60 Baldwin Street, Charlestown. Photo by BPDA Staff.

This addition fills in the typical recessed entryway, and by doing so conceals an element that contributes to the historic building's character. Next door, a recessed entryway can be seen, which was likely similar to this home's original recess.

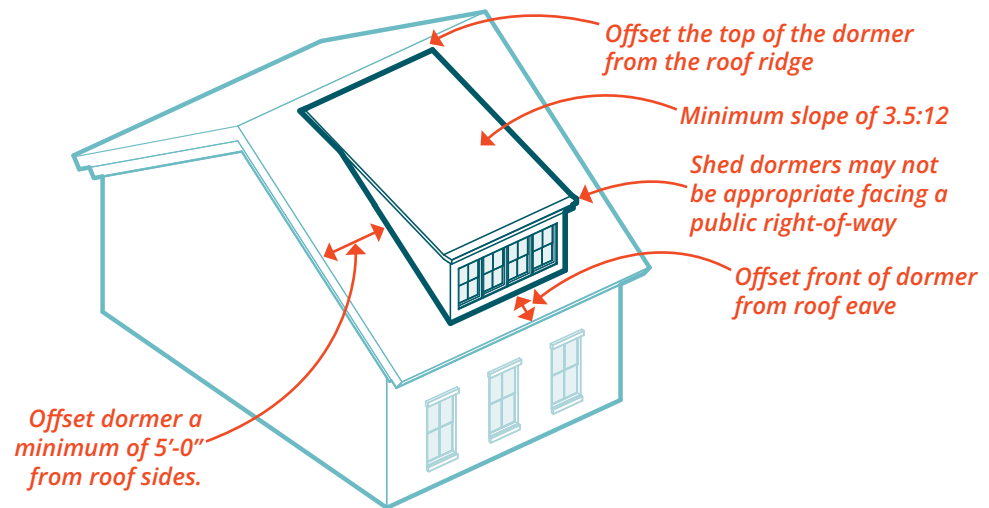
Though more complementary materials might have been chosen, the materials selected for the addition are clearly differentiated from the original brick house, and the old and new are both clearly legible.

Figure 162

Gable Dormer



Shed Dormer



Nantucket Dormer

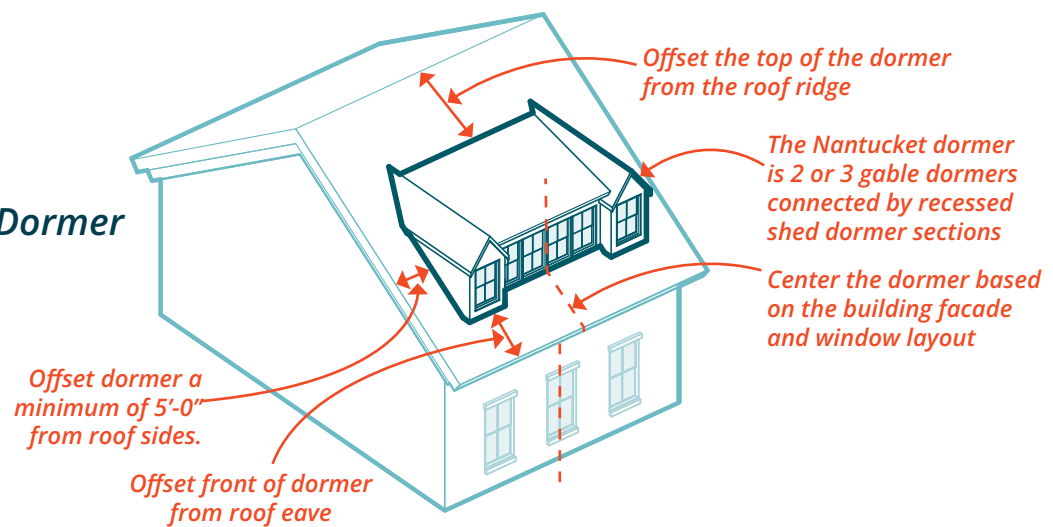


Figure 163

DORMERS

The type of dormer selected for an addition should consider the style of the existing structure, the type of roof, and if there are existing dormers on the structure. Where there are original dormers on a structure they should be preserved.

The main dormer types in Charlestown are:

Gable Dormers

- In most cases, gable dormers are the most appropriate dormer type for elevations visible from the public right-of-way.
- The proportion of the dormer should be carefully considered in relation to the dormers on other homes on the street, and in relation to the proportions of the home itself.
- Gable dormers should be aligned with windows or other elements on the facade below.

Figure 163 (p.182). Dormer Types

Shed Dormers

- For many of Charlestown's older homes, shed dormers are only appropriate where they cannot be seen from the public right-of-way, such as at rear facing elevations.
- Hold dormer edges back from the sides of the roof and down from the roof ridge line.
- Shed dormer roofs should have a minimum slope of 3.5-to-12.

Nantucket Dormers

- This is a combination of gable dormers and shed dormers. Typically there are two or three gable dormers, connected by shed dormer segments in between to allow for greater interior space.
- Nantucket dormers may be appropriate for some older homes on roof lines facing the street, but designed so the gables are evenly spaced, the gables align with windows or other elements of the facade below, and the entire dormer is centered on the roof.

Facade Alterations

Changes to materials, new windows and doors, and ornamental elements all qualify as facade alterations. This section should only be considered as a supplement to the earlier 'All Proposals' section.

¹²⁹ National Park Service. "The Secretary of the Interior's Standards for the Treatment of Historic Properties." National Park Service, Updated: June 14, 2023. <https://www.nps.gov/orgs/1739/secretary-standards-treatment-historic-properties.htm#:~:text=Standards%20for%20Rehabilitation-,The%20Secretary%20of%20the%20Interior's%20Standards%20for%20the%20Treatment%20of,Grants%E2%80%93in%E2%80%93Aid%20programs.>

HISTORIC SIGNIFICANCE

- When renovating existing facades, preserve or recreate significant architectural details wherever possible. Alterations should not conceal or alter historically significant building elements.
- Restorations should be historically accurate, without attempting to make buildings appear older than they are.
- Refer to the Secretary of the Interior's standards for additional guidance regarding the treatment of historic properties.¹²⁹

MATERIALS

- When only a portion of a facade is being altered, materials should match the existing portion of the building's facade that is being preserved.
- Brick: Maintain original exposed brick whenever possible. Do not apply paint, siding, or other cladding layers over historic brick. New sections of brick should match original brick color, texture, size, and bond as closely as possible. Mortar and joints should also match the original color, tone, and width as closely as possible. To ensure consistency with the colors and patterns of historic brick and mortar, testing may first be necessary in areas of the facade with minimal visibility.
- Clapboard and Shingles: Wood shingles are generally not historically accurate, and should be replaced with clapboard where appropriate. Match historic lap width as closely as possible, typically 4".
- Match historic corner details and trim materials wherever possible.

WINDOWS

- Restoration of original or historic windows is preferred. Installation of storm windows is allowed. Storm windows should have a narrow frame that do not protrude beyond the facade plane of the building. Storm sash should closely align with the window sash, particularly the meeting rail.
- When replacement windows are warranted, wood or wood clad windows are preferred. Vinyl windows will not be allowed. New windows should approximate original window opening dimensions; a significant reduction in original glazed openings either by increased framing or wide sash and muntin dimensions is not allowed.
- Only structural (true) muntins or exterior applied muntins which are integral with the sash frame are appropriate. Simulated muntins inserted between the panes of glass or exterior snap-in muntins should not be used. Muntins must replicate the original muntin dimension and profile, or have a raised trapezoidal profile and include an anodized spacer bar between the panes of glass. Their configuration should replicate the original pattern, typically, two-over-two or one-over-one. Six-over-six window configurations are appropriate for pre-1850s Federal/Greek Revival styles.

SHUTTERS

- When used, shutters should be of a wood louver design. Each shutter should match the height and one-half the width of the window opening. It is recommended that the shutters be installed on shutter hardware and be operable or made to appear operable.

DOORS

- Preserve original doors if possible. Modify existing doors by insulating them where possible, to improve energy efficiency.

Figure 164. 90 School Street, Charlestown. Photo by BPDA Staff.



Windows often have a rhythm and common spacing on facades, which should be maintained. It is often clear when windows have been removed or are missing.

Original ornamental details should be retained and repaired when possible, and replicated when necessary.

New windows should match the proportion, type, and size of existing windows, while also being physically aligned on the facade. This bottom window is a different size, style, and proportion.

Figure 164

Public Realm

Appropriate street and sidewalk widths should be determined in consultation with the Public Works Department (PWD) and the Boston Transportation Department (BTD). Any changes to the public right of way, including the creation of or changes to curb cuts, must be approved by the Public Improvement Commission (PIC). Proposals located where existing public realm dimensions are insufficient may require additional setbacks to provide the needed street and sidewalk width. This section should only be considered as a supplement to the earlier 'All Proposals' section.

SIDEWALKS / BOSTON COMPLETE STREETS

Sidewalks must be safe and accessible for all users, regardless of physical abilities or age. Boston Complete Street Guidelines define four zones within the sidewalk right-of-way: the Frontage Zone, Pedestrian Zone, the Furnishing Zone, and the Curb Zone.¹³⁰ Meeting these requirements may demand more dimension than currently exists in the public right-of-way.

¹³⁰ City of Boston, Boston Complete Street Design Guidelines 2013 § (2013).

FRONTAGE ZONE

The Frontage Zone is between the building edge and the Pedestrian Zone.

- The preferred width of the Frontage Zone is two (2) feet.
- When the Frontage Zone must accommodate sidewalk cafes, the preferred width is six (6) feet.
- Where constrained conditions do not provide width for the Frontage Zone, the effective width of the Pedestrian Zone is reduced by 1', as pedestrians will avoid the building edge.

PEDESTRIAN ZONE

The Pedestrian Zone is the sidewalk area dedicated to public travel.

- For Neighborhood Residential Streets, the preferred width for the Pedestrian Zone is five (5) feet. For Neighborhood Connector Streets, the preferred width for the Pedestrian Zone is eight (8) feet.
- The Pedestrian Zone should be clear of any obstructions, including utilities, trees, and furniture.

FURNISHING ZONE

The Furnishing Zone is the space between the Pedestrian Zone and the curb.

- Public fixtures such as street trees, street lights, street signage, hydrants, benches, bicycle racks, utility control boxes, and utility hatch covers are located in this zone.
- Preserve existing street trees wherever possible. Tree canopy can help mitigate the heat island effect, particularly in densely urbanized areas. Removal of existing street trees will need approval from the City's Tree Warden and, when done without approval, will result in a fine.
- Maximize opportunities to add new street trees wherever possible. New tree pits should be twenty- four (24) square feet at a minimum. Ensure a ten (10) foot clearance from curb cuts and other street fixtures such as hydrants

and light poles. Implement best management practices such as suspended pavement systems to provide adequate soil volume. The addition of street trees is especially crucial in the Lost Village residential area.

- Maximize opportunities and add curb bump outs at intersections when feasible.
- Curb cuts disrupt the Pedestrian Zone and should be avoided where possible.

PAVING MATERIALS

- Improve the safety of the public realm through repaving, sidewalk reconstruction, and utility work. Original sidewalk material should be retained or replaced in-kind in consultation with PIC and Disabilities Commission. This issue is particularly notable in the Lost Village residential area.

¹³¹ City of Boston and Boston Transportation Department, Bike Parking Guidelines § (2021).

Figure 165. Sidewalk on Main Street, Charlestown. Photo by BPDA Staff.

BIKE PARKING

- Refer to the City of Boston Bike Parking Guidelines.¹³¹



Figure 165

UTILITIES

- New projects should place their connections and utilities below-grade. This will further enhance service reliability and public safety, while contributing to an improved public realm.
- Below grade utilities shall be coordinated with landscape features and account for existing conditions to reduce conflicts in the site design
- When feasible, the Public Works Department (PWD) should advance the goals of placing utilities below grade to enhance service reliability and public safety, while contributing to an improved public realm. This issue is particularly notable in the Lost Village residential area.
- Street openings for new utility installations shall be entered into the City of Boston's Utility Coordination Software (COBUCS).

¹³² BPDA, Boston Smart Utilities Program.

Figure 166. Map of above ground utility lines in Charlestown, April 2023. Data provided by Nora Blake.

Figure 167 (p.189). Sullivan Street, Charlestown. Photo by BPDA Staff.

Figure 168 (p.189). Map of street light types in Charlestown, April 2023. Data provided by the City of Boston Public Works Department. Photos of street light types by BPDA Staff.

Figure 169 (p.189). Key Charlestown Street Light Types

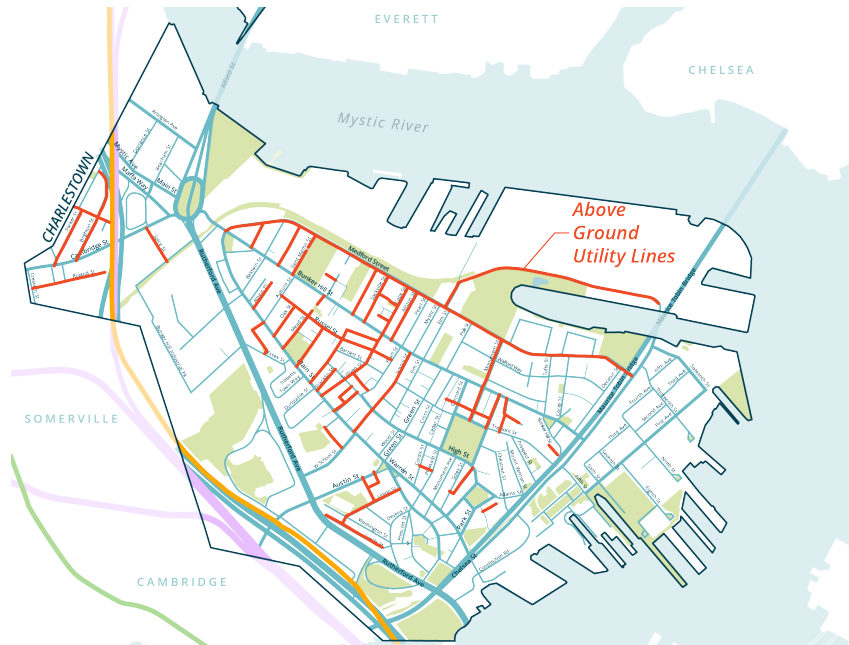


Figure 166

STREET LIGHTING

Lighting design should seek to produce appropriate light levels for neighborhoods, minimize contrast, and consider the direction of light level with respect to users. Proper lighting can create a more aesthetically pleasing and safer environment.

- When streets have work performed, such as repaving or replacing sidewalks, street light fixtures should be updated. Replacement lights should be an **arched pendant fixture**, in coordination with citywide street lighting practices and standards. New lighting should seek to provide uniformity and appropriate light distribution. The Lost Village area was updated to the arched pendant fixture when utility lines were put underground, which serves as a model for future improvements in the rest of Charlestown. Figure 168 shows the street light fixtures that exist in Charlestown in 2023.
- New street lights should be LED (Light Emitting Diode), shall be Dark Sky compliant, and have Lighting controls that meet the Public Works Street Lighting Department's standards.
- When new street lights are added to the public right-of-way, they should be located where they will not limit ADA accessibility requirements

- Creation of a neighborhood-wide lighting and electrical plan to replace outdated and unsafe street lights and overhead electrical wires, and address safety, aesthetics, wellness, sustainability, and maintenance needs
- New street light infrastructure shall incorporate city shadow conduit in accordance with Smart Utilities policy.¹³²

Street lights to have updated fixtures

As street work is completed, utilities should be placed below-grade

Sidewalks should be widened to Boston Complete Streets standards where possible.

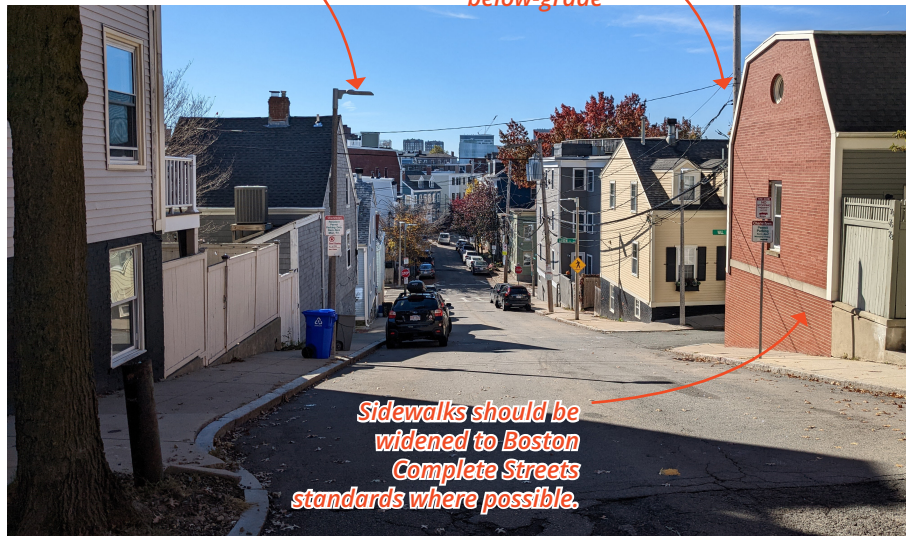
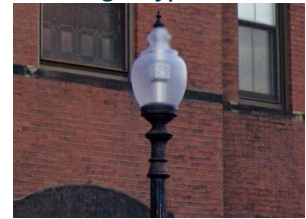


Figure 167



Figure 168

Key Charlestown Street Light Types



Acorn Light



Arched Pendant Light



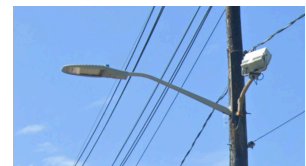
Wells Bach (Gas) Light



Bishop Crook Light



Rectilinear Light



Flood Light



Cobra head Light

Figure 169

Demolition

Demolition of existing structures for the construction of new structures should be the last option. New projects are encouraged to find creative solutions where existing structures are preserved and adaptively reused. While the BPDA does not have the regulatory authority to delay or stop demolition, the Preservation section of the Needs Analysis chapter of this plan addresses how policy changes might curb harmful demolition in the future.

BENEFITS OF PRESERVATION

- **Historic Significance:** Old buildings are reminders of a city's culture and complexity. The older buildings in Charlestown contribute to the distinctive quality of the neighborhood and have architectural merit. They allow for one to feel a distinct sense of place and community and help to tell the story of a place over time. By seeing historic buildings—whether related to something famous or recognizably dramatic—tourists and longtime residents are able to witness the aesthetic and cultural history of an area. A city needs old buildings to maintain a sense of permanency and heritage. The heart of Charlestown is the older residential district, and maintaining the quality and sense of place is vital as the neighborhood continues to evolve.
- **Sustainability:** Today we have new sustainable materials, more efficient building systems, and a number of rating systems which judge the environmental impacts of buildings, including Passive House, LEED, and WELL, among many others. While it is difficult to achieve a high rating from one of these systems by adapting existing buildings, that does not mean that the most environmentally friendly solution is demolition paired with new construction. Most often preservation and adaptation of existing buildings is the far more sustainable option when taking into account that the construction of buildings depletes limited natural resources, contributes to pollution, and uses excessive amounts of energy.¹³³

“The greenest building is the one that already exists.”

- Carl Elefante

¹³³ Preservation Green Lab. Rep. *The Greenest Building: Quantifying the Environmental Value of Building Reuse*. National Trust for Historic Preservation, 2011.

Figure 170. Adams St and Commons St intersection. Photo by BPDA staff.



Figure 170

Zoning to Support Design

Some of the urban design guidelines in this section can be reinforced through changes to the zoning code, in order to give them additional weight. Other goals of this section, such as encouraging more of the elements of Charlestown's built fabric that residents love, can also be supported through zoning. Additionally, these zoning modifications reinforce the goal of making the zoning code simpler and easier to use. The recommendations for zoning modifications based on this Chapter's urban design guidelines are summarized below, with their implementation described further in Chapter 7 of this PLAN.

1. Where possible, avoid garage doors facing public streets. Walking along garage doors is monotonous, can be unsafe due to vehicles crossing the sidewalk, and often requires the removal of trees and the addition of curb cuts. This change to the zoning would promote garage doors to face alleys or to be concealed from the public street in other ways.

2. Remove off-street parking minimums for structures with 6 or fewer housing units. For structures with 7+ units, require one parking space per unit. Building on the recommendation that garage doors be limited, off-street parking minimums should be removed for smaller structures, where they cause more curb cuts, and make it much more difficult for small home owners to add units within their building envelope, like in-law apartments. This change will give homeowners more control over their structures, trigger less curb cuts, which take away on-street parking spaces, and discourages vehicular use.

3. Simplify the Neighborhood Design Overlay District (NDOD). This recommendation is an opportunity to clean up the Charlestown Neighborhood District's zoning article, and bring it into alignment with the neighborhood's zoning map. While the map only shows one, large district, the zoning code describes that same district as being broken up into six areas, but does not explain what the boundaries are, and they are not treated differently. This discrepancy is unnecessary and confusing, which would be rectified by making the NDOD in the code one district, to match the map.

4. Simplify Charlestown's 2F and 3F subdistricts by converting the 2F-3000 and 3F-3000 subdistricts to be 3F-2000 subdistricts. In Charlestown there are three 2- and 3-family zoning subdistricts; however, the 3F-2000 subdistrict is covers 95% of that area, and is the most in line with the built urban fabric that residents wish to see be preserved and replicated in their neighborhood. This recommendation would bring all of these zones into alignment by making all of the areas 2F-3000. See Chapter 7 for more details.

5. Update the rear yard setback requirement for Row House subdistricts to be 15 feet. Rear yard requirements for row houses in Charlestown are between 25 and 30 feet, but most existing row houses have much less than that, often between 10 and 15 feet. Updating the rear yard requirement to 15 feet will reduce existing nonconformities and therefore reduce barriers for property owners seeking to make modifications to their homes.

06

THE

CHARLESTOWN

NAVY YARD

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Figure 171

¹³⁴ "Charlestown Navy Yard." National Park Service. Accessed July 20, 2023. <https://www.nps.gov/articles/000/charlestown-navy-yard.htm>.

¹³⁵ BPDA. "Navy Yard Master Plan Implementation." 1797: Navy Yard commissioned for military use | Boston Planning & Development Agency. Accessed July 20, 2023. <https://www.bostonplans.org/neighborhoods/charlestown/navy-yard-master-plan-implementation>.

¹³⁶ Ibid

¹³⁷ Ibid

¹³⁸ National Park Service. "Charlestown Navy Yard." National Park Service, January 11, 2023. <https://www.nps.gov/bost/learn/historyculture/cny.htm>.

¹³⁹ BPDA. "1974: Navy Yard Decommissioned and Conveyed to BRA." 1974: Navy Yard decommissioned and conveyed to BRA | Boston Planning & Development Agency. Accessed July 20, 2023. <https://www.bostonplans.org/neighborhoods/charlestown/navy-yard-master-plan-implementation/1974-navy-yard-decommissioned-and-conveyed-to-bra>.

Figure 171. Aerial photo of the Charlestown Navy Yard

Figure 172. Property owners in the Charlestown Navy Yard Map. BRA.

Introduction

The Charlestown Naval Shipyard is a significant site for maritime history and planning in Boston. This area has been known by a host of different names: the Boston Naval Shipyard, the Boston Navy Yard, and its current moniker, the Charlestown Navy Yard (CNY) or just 'the Navy Yard.'¹³⁴ Long before the area was referred to as the CNY, local indigenous communities were active here for thousands of years, until colonization. The CNY was commissioned for military use in 1797, becoming one of six naval shipyards in the United States in 1798. The Federal Government purchased 23 acres on the Charlestown waterfront for \$19,000 - opening the Navy Yard for operations in 1801.¹³⁵ Across 161 buildings, 21 miles of railroad, and a number of docks, piers, and shipways, Navy Yard workers built and repaired ships that were involved in major historic battles.¹³⁶ The Navy Yard was decommissioned on July 1, 1974, and a portion was conveyed to the Boston Redevelopment Authority (BRA), today known as the BPDA, in 1978.¹³⁷

Today, nearly 1.5 million people visit Charlestown annually to explore the Harborwalk, Freedom Trail, historic naval area, USS Constitution, and USS Cassin Young. Of the Navy Yard's 130 acres, the National Park Service (NPS) owns approximately 30 acres, the BPDA owns 98 acres, and there are a mix of private property owners (figure 172).¹³⁸ The Navy Yard is now a vibrant area that is home to many Charlestown residents, as well as Spaulding Rehabilitation Hospital, and many small businesses.

The CNY is a mixed use area allowing residential, office, retail, and institutional uses depending on the parcel.¹³⁹ There is a particular emphasis on marine activities and open space along the waterfront, and residential uses within the Housing Priority Area (figure 172). The development of the CNY is guided by the Program for Preservation and Utilization, which suggests land uses and has established design guidelines in the area through a unique parcel specific system.

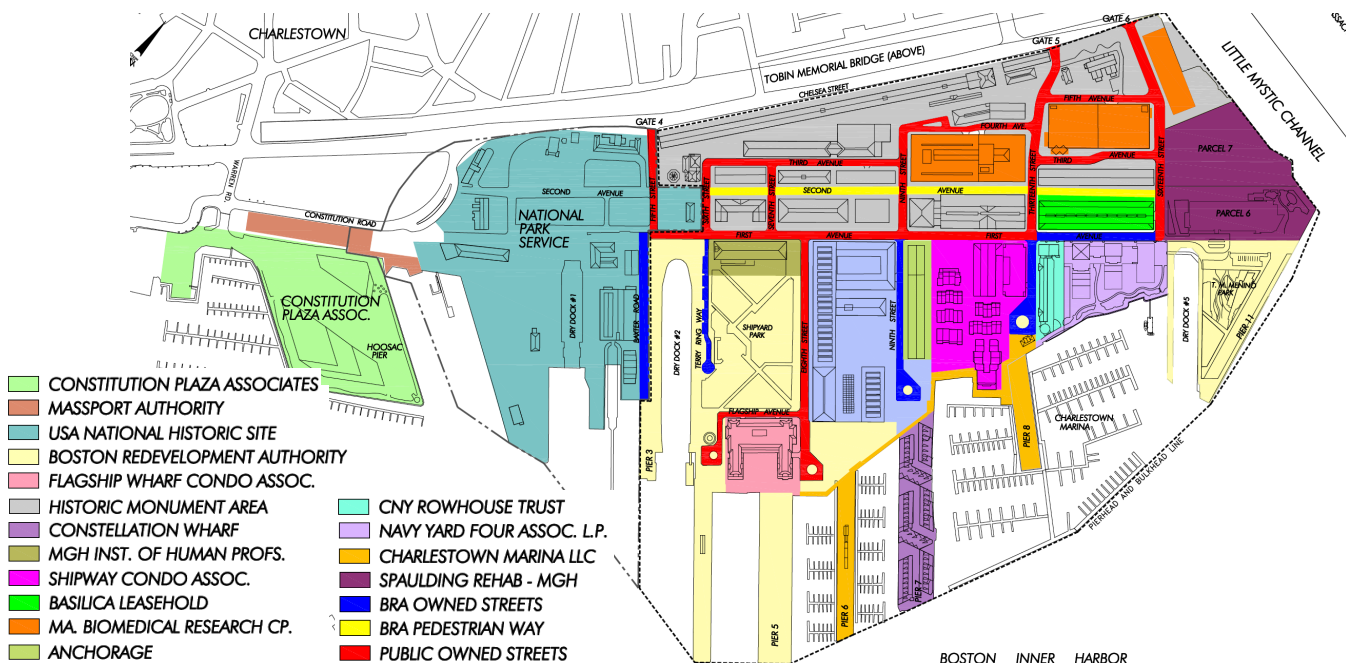


Figure 172

Past Plans

¹⁴⁰ Boston Redevelopment Authority, Boston Naval Shipyard Charlestown Planning and Development Program § (1975). <https://www.bostonplans.org/getattachment/2111a818-53f4-4198-b45b-df310a1519d8>

¹⁴¹ Ibid

¹⁴² Boston Redevelopment Authority, The Charlestown Navy Yard Design Guidelines for Reuse § (1978). <https://www.bostonplans.org/getattachment/f11dfb62-1303-4460-8c72-c26ba6c29d02>

The CNY is one of the most planned for areas within the City of Boston. There have been 9 plans completed by the BPDA (then the BRA) since 1975, multiple historic and cultural asset reports, and a visitation plan completed by the NPS. These plans do not expire, instead build on one another to provide comprehensive guidance for the future of the Navy Yard. PLAN: Charlestown does not attempt to redo these planning efforts by past experts and residents, but this PLAN instead highlights the key measures that remain to be implemented within this unique part of the neighborhood, while also including the Navy Yard in the larger neighborhood-wide needs analysis (see Chapter 2). The CNY illustrates how planning is a long range endeavor, sometimes taking decades for a vision to come to fruition. When thinking about the Navy Yard's future, we look at previous plans to guide present day decision making.

1975 - Boston Naval Shipyard Charlestown Planning & Development Program

Summary: The first major land use and comprehensive plan for the CNY.

Accomplishments: This plan identifies key needs and categorizes the CNY into two areas that we still refer to today: the Historic Monument Area (HMA) and the New Development District (Figure 173).

Continuing Relevance: The planning needs identified guide current development with attention to connectivity to the rest of Charlestown and the larger City, transportation access, employment opportunity, and waterfront activation for recreational, institutional, and residential uses.¹⁴⁰ This plan also emphasizes the importance of preserving the historic character of the Naval Shipyard while place making within New Development areas to create a Navy Yard identity.¹⁴¹ All of the above are planning principles which still guide current initiatives.

1977 - Program of Preservation and Utilization

Summary: This document covers all parcels in the Navy Yard and highlights proposed treatment of each building for preservation, demolition, or rehabilitation. Additionally, urban design elements and types of use are emphasized within this document.

Accomplishments: One of the many implementation successes of The Program is exemplified in Parcel 39A. This parcel, once an underutilized parking lot, has now been redeveloped to match the design context of the historic Navy Yard. Additionally, this parcel now provides residential uses to the area.

Continuing Relevance: This documents guides BPDA response to building changes within the Navy Yard pertaining to treatment, urban design, and use.

1978 - Design Guidelines - Historic Monument Area Boston Naval Shipyard at Charlestown

Summary: The 1978 Design Guidelines for the Historic Monument Area (HMA) highlights the historical importance of this area and maps future plans for open space, transportation, and housing. Additionally, this document outlines the physical changes that can or cannot be made to buildings within the HMA, to facilitate building adaptive reuse.¹⁴²

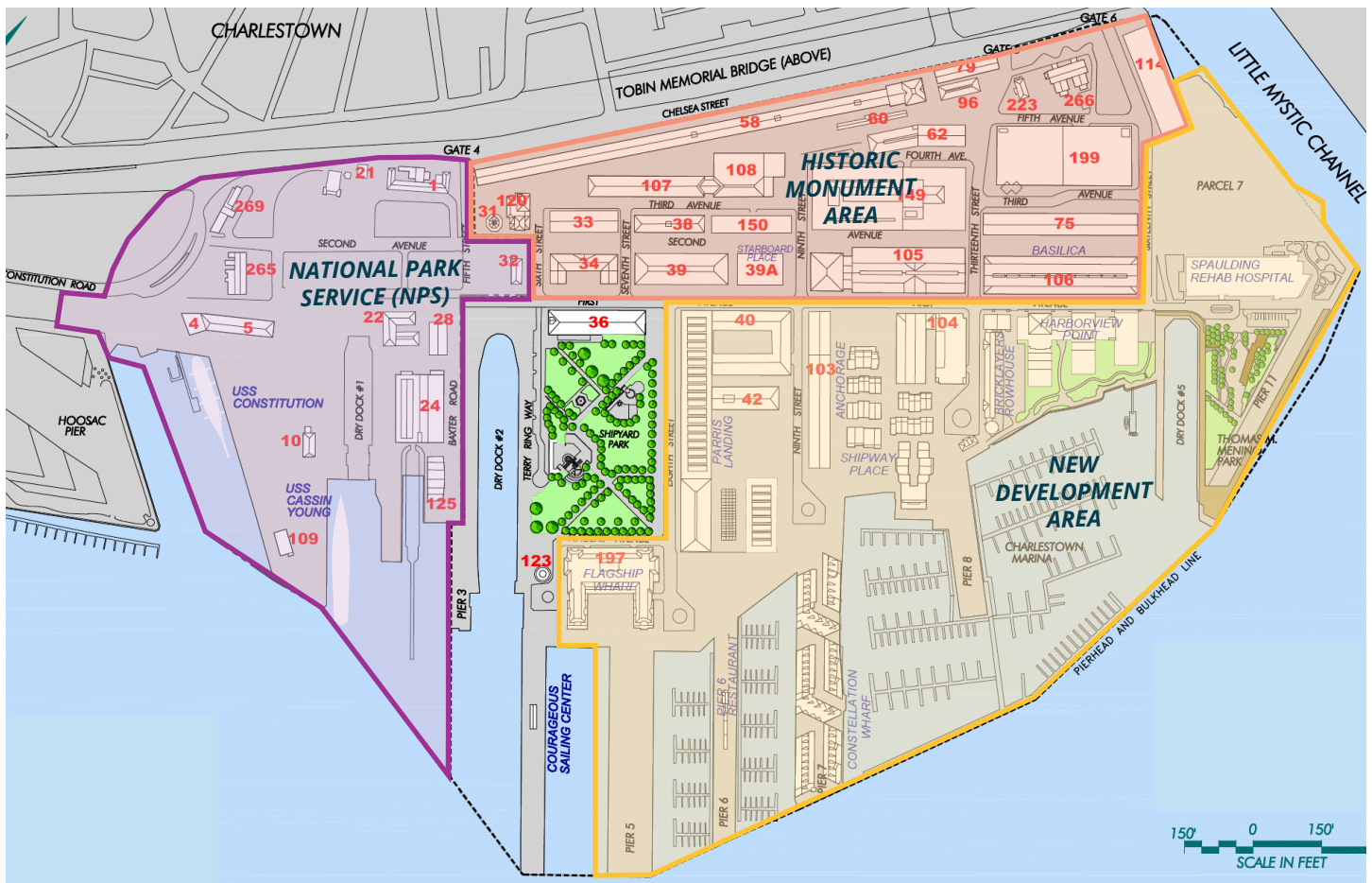


Figure 173

Accomplishments: The creation of Shipyard Park.

Continuing Relevance: The BPDA continues to refer to these guidelines during the development process to ensure that all proposals are in compliance.

1978 - Design Guidelines: New Development Area Boston Naval Shipyard at Charlestown

Summary: The 1978 highlights the important architectural and urban design features within the CNY's New Development Area. This plan addresses design and use guidelines for current and future developments on each parcel.¹⁴³

Accomplishments: The restoration and rehabilitation of Building 104 is a direct result of this plan. Building 104 is now dedicated to affordable elderly housing.

Continuing Relevance: The BPDA continues to refer back to these guidelines during the development process to ensure that all proposals are in compliance.

1986 - Navy Yard - Anchor in Harbor Park

Summary: This plan summarized completed and in progress development projects in the area. The adaptive reuse of historic buildings to office, retail, and residential spaces was a key feature. This plan emphasized the historic significance of the Navy Yard to the U.S., Boston, and Charlestown, prioritizing preservation and activation.¹⁴⁴

Accomplishments: The rehabilitation of historic buildings for residential, office, and retail use has contributed to the economic development of the Navy Yard.

Continuing Relevance: This plan affirms the CNY's model of adaptive reuse.

¹⁴³ Boston Redevelopment Authority, Design Guidelines New Development Area Boston Naval Shipyard at Charlestown § (1978). <https://www.bostonplans.org/getattachment/8c6b38f3-580b-4dd2-98fe-3ad8ecd5800f>

¹⁴⁴ Boston Redevelopment Authority, Navy Yard - Anchor in Harbor Park § (1986). <https://www.bostonplans.org/getattachment/76cd1c66-f0f4-46e7-80de-c74bc6a9d30c>

Figure 173. Map of Charlestown Navy Yard planning areas

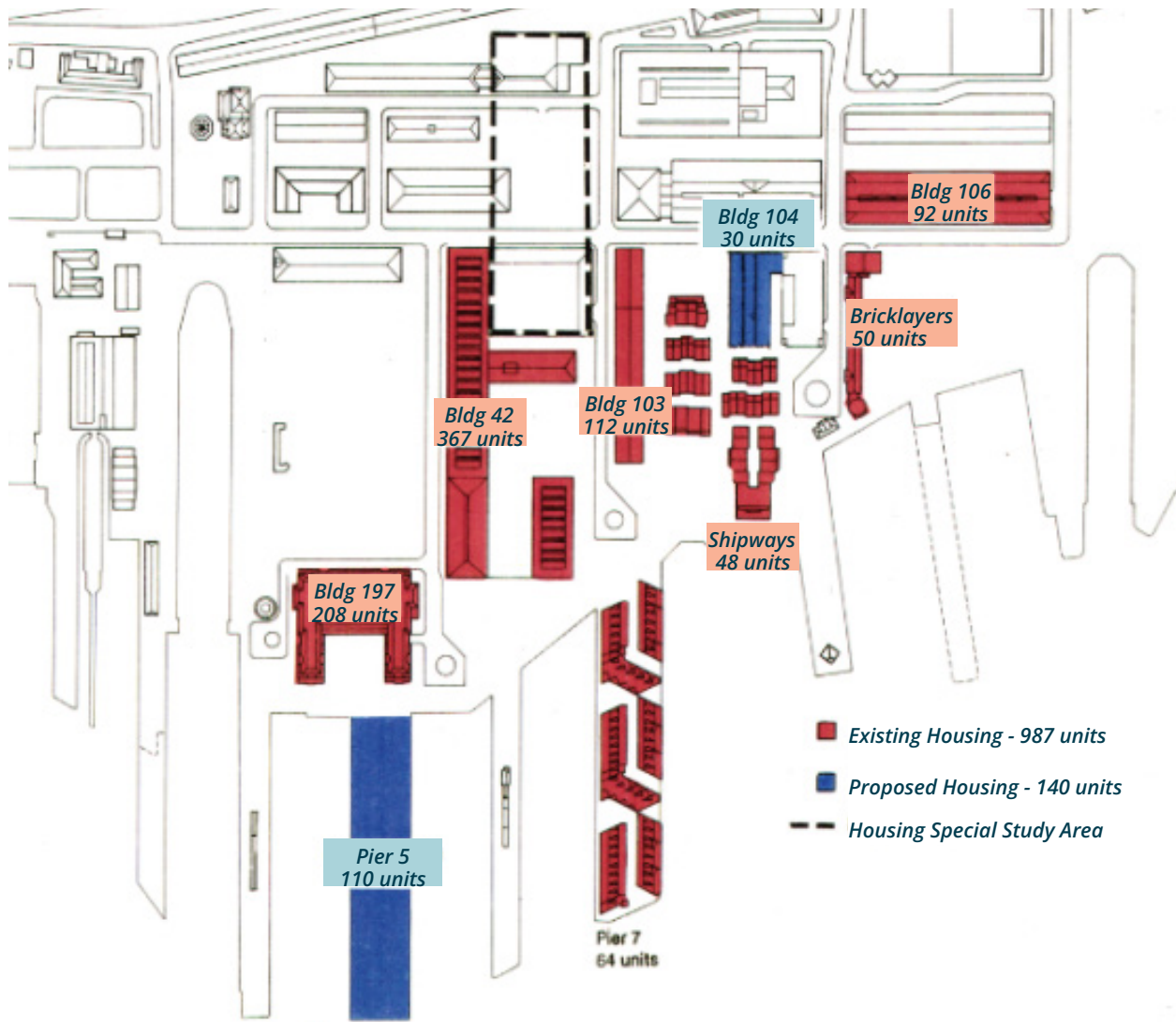


Figure 174

1990 - Charlestown Navy Yard Master Plan for the Yard's End

Summary: The Yard's End Plan was the culmination of a three year process that included 85 public meetings and resulted in updated planning principles, redevelopment strategies, and goals for the revitalization of the Navy Yard.

Accomplishments: This plan specifies institutional use at the Yard's End, setting up for the current location of the Spaulding Hospital complex.¹⁴⁵ The plan also details the expansion of Shipyard Park to Dry Dock 2, and a variety of smaller parks and gardens that are present in the Navy Yard today.¹⁴⁶ A major highlight includes the Long Wharf-Charlestown Ferry which started service in 1987 and still continues today. This shuttle service is an important amenity for residents of the Navy Yard, providing quick service to downtown, and for visitors to explore all that the Yard has to offer. PLAN: Charlestown's proposal for shuttle service within the Navy Yard (see Chapter 3) directly builds on this plan.

Continuing Relevance: A major goal of the plan, which remains a goal today, was the development of housing, with a target of 25% affordable units. A Housing Special Study or Priority Area was established to encourage affordable and age-friendly housing units within the Navy Yard (see Figure 174).¹⁴⁷

¹⁴⁵ Boston Redevelopment Authority, Master Plan for the Yard's End, 1990. <http://www.bostonplans.org/getattachment/89805f21-9d28-4e9f-ad46-79ae4d453756>.

¹⁴⁶ Ibid

¹⁴⁷ Ibid

Figure 174. Charlestown Navy Yard 1990 Housing Map. This map highlights the vision for the Navy Yard in 1990.

1990 - City of Boston Harborpark Municipal Harbor Plan

Summary: This plan informs several waterfront neighborhoods, and is the plan of reference in the zoning code for the Navy Yard (Article 42F). The plan acts as an overlay district intended to protect natural water resources and guide development to provide social and economic benefits for the public.¹⁴⁸ While these changes were implemented citywide, there is specific emphasis on the CNY with attention to height, setbacks, and open space to allow for more public enjoyment, mixed use and affordable development along the waterfront.¹⁴⁹

Accomplishments: The plan specifies improving Medford Street to become more pedestrian friendly and increasing recreational activity along the Little Mystic waterfront area.¹⁵⁰

Continuing Relevance: The plan still guides development within the CNY and the recommendations from this plan are present in PLAN: Charlestown.

¹⁴⁸ Boston Redevelopment Authority, Harborpark Plan, City of Boston Municipal Harbor Plan, (1990). <https://www.bostonplans.org/getattachment/a99aa636-f06e-486f-a34d-ffb10f36146a>

¹⁴⁹ Ibid

¹⁵⁰ Ibid

Figure 175. Charlestown Navy Yard docks and sailboats. Photo by BPDA staff.



Figure 175

2000 - Charlestown Naval Shipyard Comprehensive Update

Summary: This plan provides an audit and evaluation of current buildings with attention to the Historic Monument Area. The plan ensures safety and compliance with urban design guidelines among all parcels and assesses the economic impact of the area.

Accomplishments: This plan helped to establish the CNY as a center for research, biotechnology, and medical companies within the area.¹⁵¹ The rehabilitation of the Ropewalk and Tar House were based on this plan.

Continuing Relevance: This plan details the restoration effort for the current and future projects, including the Chain Forge building, which is presently under agreement for development.

2007 - Waterfront Activation Network Plan for the Charlestown Navy Yard

Summary: This plan proposes a public access and open space network to reinforce the CNY's character. The Activation Plan proposes programming and events, targeted waterfront improvements, and fundraising to implement the plan.¹⁵²

Accomplishments: Several recent public activations, implemented through BPDA Request for Proposal (RFP) opportunities, have fulfilled many of the goals of the Activation Plan. For example, in 2019, the BPDA received three proposals that would activate the Navy Yard waterfront with temporary free public programming.¹⁵³

In April 2022, the BPDA also designated a partner to help activate Shipyard Park in the Navy Yard. As part of the partnership, 15% of the revenues from The Anchor, a beer garden location in Shipyard Park, go towards the revitalization and activation of the Waterfront area including exercise classes, art events, live performance, and community services.¹⁵⁴ Additionally, Courageous Sailing has called the Navy Yard home for over three decades and has played a major role in fostering community, revitalizing the waterfront, and nurturing young minds.

Continuing Relevance: Revitalization of the Waterfront remains a goal today to accommodate for recreation, growth, and resiliency. The plan continues to guide decisions around way-finding and activation in the CNY.

¹⁵¹ Boston Redevelopment Authority, Charlestown Naval Shipyard Comprehensive Update for the Historic Monument Area, (2000). (p.106) <https://www.bostonplans.org/getattachment/330e9cd4-18eb-4148-8edc-ff981238e0d9>

¹⁵² Boston Redevelopment Authority, Waterfront Activation Network Plan for the Charlestown Navy Yard, 2007. <https://www.bostonplans.org/getattachment/d60e6660-8f44-4b1b-92dc-ac9e0c8dea4e>.

¹⁵³ BPDA. "Three Proposals to Activate the Charlestown Navy Yard Approved by the BPDA." BPDA - News & Updates, March 15, 2019. <https://www.bostonplans.org/news-calendar/news-updates/2019/03/15/three-proposals-to-activate-the-charlestown-navy-y>.

¹⁵⁴ BPDA. "Shipyard Park Activation at the Charlestown Navy Yard." Shipyard Park Activation at the Charlestown Navy Yard | Boston Planning & Development Agency, 2022. <http://www.bostonplans.org/planning/planning-initiatives/shipyard-park>.

Figure 176. CNY Waterfront Activation Map, Waterfront Activation Network Plan for the Charlestown Navy Yard, 2007. p43.

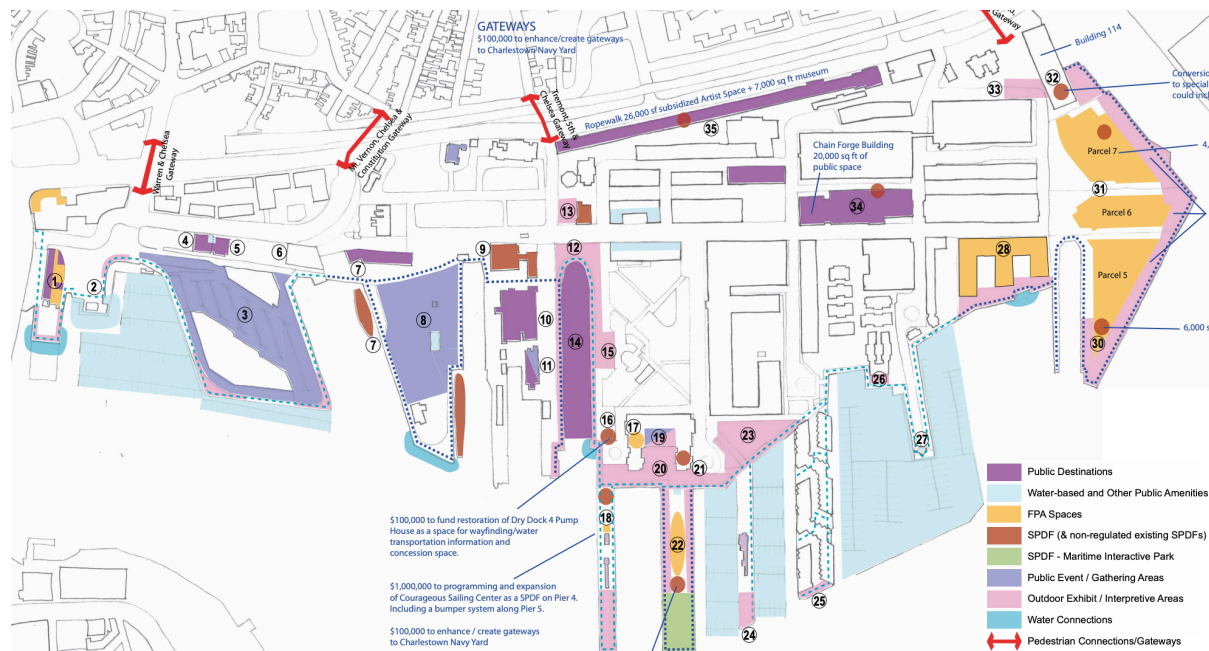


Figure 176

2022 - Climate Ready Boston: Coastal Resilience Solutions for East Boston and Charlestown Phase II

The Coastal Resilience Solutions for East Boston and Charlestown Phase II plan identifies resilience solutions to preserve the Navy Yard's community and ensure longevity as sea levels rise.¹⁵⁵ For more information please refer to the Climate Resilience section of the Needs Analysis Chapter of this Plan.

From previous plans the goals for the CNY are: (1) Adaptive reuse and preservation, (2) Waterfront activation, (3) Economic development, (4) Promoting affordable residential uses, (5) Improved connectivity, and (6) Resilience.

¹⁵⁵ Climate Ready Boston, Coastal Resilience Solutions for East Boston and Charlestown Phase II, 2022. <https://www.boston.gov/sites/default/files/file/2022/08/Coastal-Resilience-Solutions-for-East-Boston-and-Charlestown-Phase-II-August-2022.pdf>

Figure 177. The Charlestown Harborwalk. Photo by BPDA staff.

Figure 178. Menino Park, CNY. Photo by BPDA staff.



Figure 177



Figure 178

Future and Ongoing Work

The City of Boston supports these goals through ongoing and future work listed below.

ONGOING

1. Pier 4 Rehabilitation: Improvements include a complete reinforcement to the support structure which consists of dredging and the installation of floats, gangways, utilities, handrail improvements, and a fender system, to ensure the longevity of this public open space.¹⁵⁶ This project is expected to be completed in 2023.

2. Building 105: Also known as the Chain Forge building, Building 105, has been approved for a 180,000 square foot redevelopment into a 230 room hotel.¹⁵⁷

3. Building 108: Following the guidelines for Building 108, the former power plant, the building was demolished in 2023. The proposed replacement project includes lab and research space, a cafe, and open space.^{158 159}

4. National Park Service (NPS) Planning: The NPS conducts planning of their land. They recently launched an environment assessment with the intention to construct a new site for the USS Constitution Museum and Visitor Center. Additional plans include the demolition of Building 109 and replacement with an open frame structure to provide shade for visitors, special events, and other amenities.¹⁶⁰

FUTURE

- Pier 5: This site is currently undeveloped, and owned by the BPDA; the BPDA is evaluating the Pier to better understand the structural conditions and how to utilize the space.¹⁶¹
- Parcel 7: This site remains undeveloped and is privately owned.
- Harbor Walk Improvements: Future planning initiatives will center around revitalizing the space including improving walkability and public access
- Building 123: The Pump house, also known as Building 123, is currently underutilized on the waterfront. There are no current plans for rehabilitation however, with significant investment, this could be a potential site to enhance the public experience at the Waterfront.
- Charlestown Navy Yard Flood Mitigation Planning & Feasibility Assessment: There will be a vulnerability assessment conducted by the BPDA to understand the current and future climate challenges including sea-level rise and coastal storms concerning the Navy Yard. Please refer to the Climate Resilience section of the Plan for more information.
- Inner Harbor Connector: There is opportunity to expand existing ferry service between Charlestown and Downtown Boston with potential to service East Boston and the South Boston Seaport.

¹⁵⁶ "Pier 4 Improvements." Boston Planning & Development Agency, 2013. <http://www.bostonplans.org/projects/capital-construction/pier4-improvements>.

¹⁵⁷ "Chain Forge Building 105." Boston Planning & Development Agency. <http://www.bostonplans.org/projects/development-projects/chain-forge>

¹⁵⁸ "Building 108." Boston Planning & Development Agency. <https://www.bostonplans.org/projects/development-projects/building-108>

¹⁵⁹ Boston Planning and Development Agency. BPDA Division Real Estate Report. 2021. p10. <https://www.bostonplans.org/getattachment/3311c460-9666-413f-8c33-f9d55aa8e3c9>

¹⁶⁰ "National Park of Boston Develops Environmental Assessment". National Park Service. June 21, 2022. https://www.nps.gov/bost/learn/news/2022-06-21-npb_develops_ea.htm

¹⁶¹ "Pier 5." Boston Planning and Development Agency. <https://www.bostonplans.org/planning/planning-initiatives/pier-5>

Recommendations

¹⁶² Boston Redevelopment Authority. Program of Preservation and Utilization. July 25, 1977.

Figure 179. Harborwalk signage. Photo by BPDA staff.

Figure 180. Harborwalk along Dry Dock 2, Charlestown Navy Yard. Photo by BPDA staff.



Figure 179

PLAN: Charlestown relies upon the previous 9 completed plans for the Navy Yard, described in detail in this section, to guide the future of the CNY. A few key elements which this PLAN specifically elevates include:

1. **Improved Connectivity:** Building on the 1990 Yards End plan, the Chapter 3 of this PLAN outlines all details for future transportation methods for the Navy Yard, including new privately funded, free shuttles, new bike lanes, and improved pedestrian infrastructure.
2. **Adaptive Reuse and Preservation:** The 1977 Charlestown Navy Yard Program for Preservation and Utilization document outlines the urban design guidelines for the Navy Yard. This document governs the rehabilitation of historic buildings, the design review process for new construction, and any and all additional elements of urban design that pertain to the area.¹⁶² The BPDA should continue to use these guidelines to inform development and design considerations within the Navy Yard.
3. **Waterfront Activation:** Signage around the Harborwalk should be updated to provide an agreeable experience for all visitors to the waterfront including legibility and awareness, per the 2007 Activation Plan.
4. **Economic Development:** The City should increase economic activity in the CNY by creating opportunities for small businesses or incubators on publicly owned land, per the 1986, the 1990, and the 2000 plans.
5. **Resilience:** PLAN: Implement the recommendations from the Coastal Resilience Solutions for East Boston and Charlestown Phase II.



Figure 180

07

IMPLEMENTATION

206 | Overview

208 | Minor Zoning Updates for the
Original Peninsula and Lost Village

217 | Recommendations Table

Overview

PLAN: Charlestown offers a vision for the future of Charlestown based on significant input from community members, city and state agencies, and expert consultants. The plan culminates in a framework for zoning and over 90 recommendations across a range of topics. Implementation of some of these recommendations will occur in the short-term, while others will occur over the course of 30 years. The minor zoning updates, described in this chapter, are some of the first recommendations that can be implemented. This chapter then catalogues all of the plan recommendations and identifies strategies for their implementation. The Mayor's Planning Advisory Council will be instrumental in overseeing this implementation.

Planning Advisory Council (PAC)

Formally launched in July, 2023, the Planning Advisory Council is composed of Cabinet officials overseeing Boston's built environment, including planning and development review, housing, parks and environment, streets, public facilities, arts, equity, as well as the City's CFO. The PAC will now serve as a convening body focused on reviewing and implementing citywide, interdepartmental planning recommendations. In the coming year, the PAC will work in partnership with BPDA and City of Boston staff to make the implementation plan for PLAN: Charlestown actionable.

THE TOOLS IN THE TOOLBOX

The 90+ recommendations detailed in the Recommendations Table can be realized via the following:

Zoning & Regulatory Powers

Boston's Zoning Code dictates the appropriate heights, densities, and uses allowed in different areas of the City. The Zoning Code is updated via petitions submitted by the BPDA Board to the Boston Zoning Commission. The nine minor zoning updates noted below, along with other longer-term zoning reforms, will be brought to the Commission in the coming months. Beyond zoning, City departments can shape rules and regulations, such as residential parking permits.

Private Development Review

Private developers have an important role to play in shaping our built environment. Through the Article 80 Review process, the BPDA works closely with private developers and major institutions, like our universities and hospitals, to guide built form, private investments in the public realm, and community benefits. Sometimes, the City works with developers to build on City land, which creates even more opportunity for new public amenities - from open space to grocery stores to spaces for artists - and can yield substantially more affordable housing units for our residents.

Capital Planning

Many of the implementation priorities identified in PLAN: Charlestown require capital investment to be realized. The City of Boston, like all U.S. cities, draws on multiple sources of funding for improvements to the built environment. Major projects are prioritized via the City's Capital Plan, which is revisited annually and lays out investments anticipated over the next five years.

Each City department leads its own capital planning process. Projects are initially prioritized by departments based on major planning initiatives, community needs and equity considerations, past investment, and state of good repair. These priorities are submitted to the Office of Budget Management (OBM), which evaluates financial needs and existing commitments citywide. OBM then works closely with the Mayor's Office and City Council to refine priorities, and submits a draft 5-Year Capital Plan to the City Council for review, amendment, and official authorization.

The City considers multiple potential sources of funding for all of its capital priorities, including those that emerged from PLAN: Charlestown. The three major sources include:

- **Municipal Borrowing:** As a result of careful fiscal management, Boston has the benefit of an AAA/Aaa bond rating, the highest possible. Similar to an individual's credit rating, this means the City can more easily and affordably borrow the funds it needs. The City prioritizes borrowing for capital projects when public funds are essential to meet a critical need.
- **State and Federal Grants:** The City aggressively pursues federal and state funding aligned with its priorities, both in form of competitive grants and direct appropriations. Some grants which have previously benefited Charlestown include the 2017 Community Coastal Resilience Grant from the Office of Coastal Zone Management which was used to complete the Coastal Resilience Solutions for Charlestown and East Boston.
- **Additional Sources:** Charlestown uniquely benefits from two additional sources of funds, both available as part of government agreements with Wynn Resorts.
 - The **Charlestown Community Impact Fund** is the repository for a \$2 million annual Community Impact Fee, initially assessed in 2016 and will continue for 15 years, plus a one time \$1 million fund for Charlestown nonprofits. Overseen by a Managing Committee that includes the City of Boston's Collector-Treasurer, its Chief of Streets and Chief of Civic Engagement as well as city and state elected officials representing Charlestown, the fund is primarily intended for transportation improvements. The City has also received funding for transportation improvements in Charlestown via the **Community Mitigation Fund** overseen by the Massachusetts Gaming Commission.

The City of Boston is well equipped - perhaps better than ever before - to address the needs and priorities of constituents that emerge from planning processes.

Minor Zoning Updates

ZONING GOALS

This PLAN makes a series of recommendations affecting the zoning of the Original Peninsula and Lost Village areas, intended to do three things:

1. Make the Zoning Articles governing Charlestown easier to understand and use.
2. Modify Charlestown's zoning to better reflect and protect the parts of Charlestown's built fabric which residents love.
3. Update Charlestown's zoning to promote the planning outcomes residents desire.

ZONING UPDATE RECOMMENDATIONS

The following nine zoning modification recommendations come from Chapters 2 and 5 of this PLAN. They all support the zoning goals above, as well as the urban design and land use goals outlined in their specific chapters.

1. Make needed retail uses, like laundromats and gyms, less restricted in Multifamily (MFR), Community Facilities (CF), Local Convenience (LC) and Neighborhood Shopping (NS) subdistricts in Charlestown.

The retail and food security analysis from Chapter 2 of this PLAN identifies a need for laundromats, gyms, pharmacies, and food and beverage establishments in Charlestown. However, the Charlestown Neighborhood zoning article restricts several key retail types, which make them more difficult to add to the neighborhood. Land uses can either be 'Allowed', 'Forbidden', or 'Conditional'. This PLAN recommends the following changes to land uses in the four recommended subdistricts:

Land Use	Exist	Prop.
MULTIFAMILY (MFR)		
Community Center	C	A
Day Care	C	A
Day Care, Elderly	C	A
Fitness Center / Gym	F	A
Clinic	F	A
Bakery	F	A
Local Retail Business	F	A
Barber / Beauty Shop	F	A
Laundry, Retail	F	A
Laundry, Self	F	A

Land Use	Exist	Prop.
COMMUNITY FACILITIES (CF)		
Kindergarten	C	A
Bar	F	A
Restaurant w/ Live Entertainment	F	A
Clinic	F	A
Hotel	F	C
Restaurant	C	A
Take-out Restaurant	F	A
Bakery	F	A
General Retail	F	A
Barbe / Beauty Shop	F	A
Dry-cleaning Shop	F	A
Laundry, Retail	F	A
Laundry, Self	F	A

Land Use	Exist	Prop.
LOCAL CONVENIENCE - 1ST FLOOR		
ATM	C	A
Bank	C	A
Bar	F	A
Fitness Center / Gym	C	A
Clinic	C	A
Restaurant	C	A
Take-out Restaurant	C	A
NEIGHBORHOOD SHOPPING - 1ST FL		
Bar	F	A
Bar w/ Entertainment	F	C
Clinic	C	A
Take-out Restaurant (Large)	C	A

A = Allowed; C = Conditional; F = Forbidden

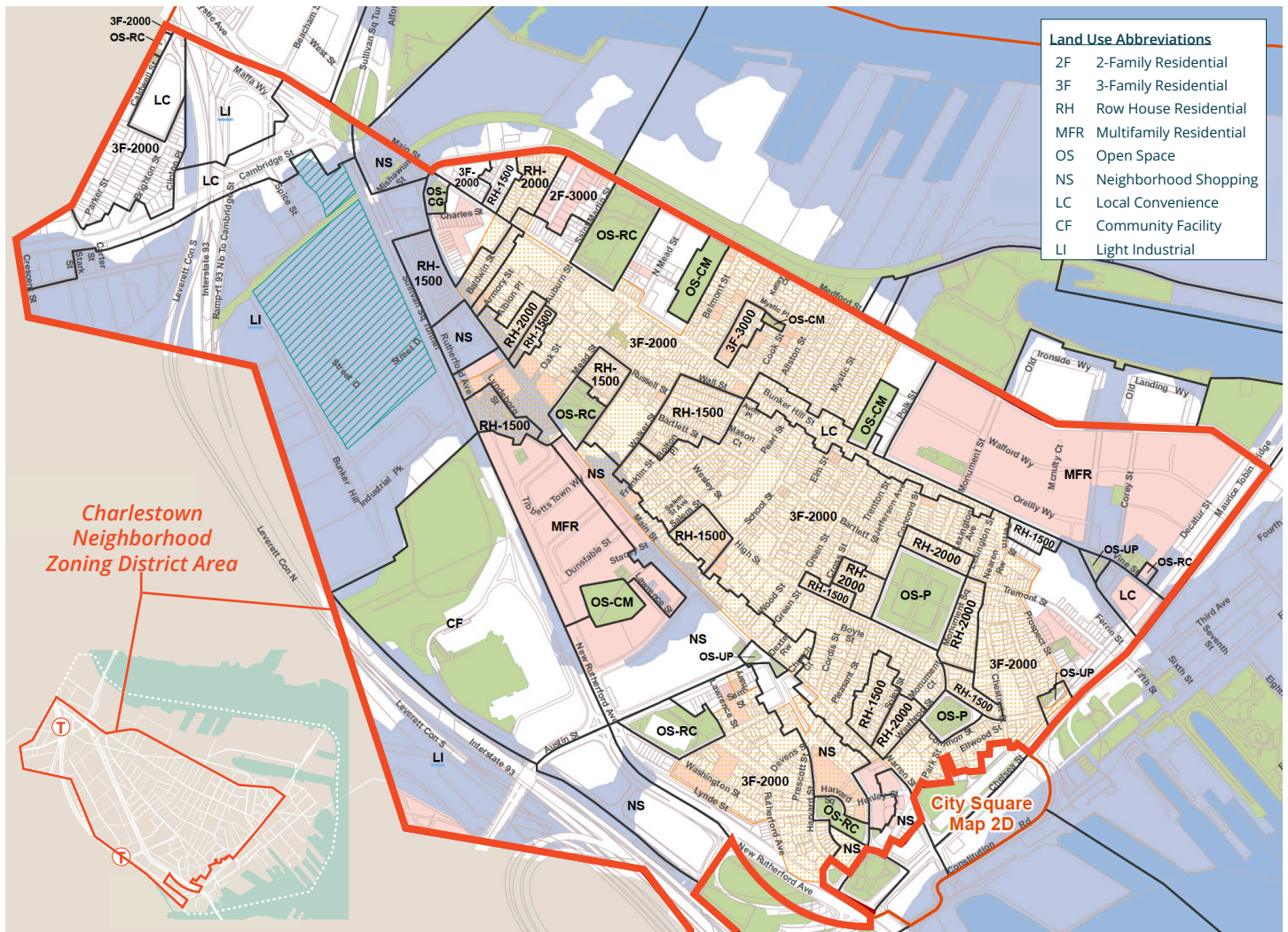


Figure 181. Charlestown Neighborhood District Zoning Map (Map 2E)

2. Reduce restrictions on arts and culture uses in Multifamily Residential (MFR), Community Facilities (CF), Local Convenience (LC), and Neighborhood Shopping (NS) subdistricts across the neighborhood.

The arts and culture analysis from Chapter 2 of this PLAN advocates for making certain arts and culture related land uses, like public art and artist space, less restricted in the zoning code, to make them easier to add to the neighborhood. This PLAN recommends the following changes to land uses in the four recommended subdistricts:

Figure 181. Charlestown Neighborhood District Zoning Map 2E. Boston Zoning Code. Key map and abbreviations added by the BPDA.

Land Use	Existing	Proposed
MULTIFAMILY (MFR)		
Public Art, Display	F	A
COMMUNITY FACILITIES (CF)		
Public Art, Display	C	A
Studios, Art	C	A
Studios, Production	C	A
Theatre	C	A
Artists' Mixed-Use	F	A

Land Use	Existing	Proposed
LOCAL CONVENIENCE - ALL FLOORS		
Art Use	C	A
Museum	C	A
NEIGHBORHOOD SHOPPING - ALL FLOORS		
Art Use	C	A
Theatre	C	A

A = Allowed; C = Conditional; F = Forbidden

3. Make residential uses 'Conditional' in on ground floor levels of Local Convenience (LC) and Neighborhood Shopping (NS) subdistricts of the Charlestown Neighborhood District.

Land Use	Existing	Proposed
LOCAL CONVENIENCE - 1ST FLOOR		
Multifamily	A	C
Rowhouse	A	C
Townhouse	A	C
NEIGHBORHOOD SHOPPING - 1ST FLOOR		
Multifamily	A	C
Rowhouse	A	C
Townhouse	A	C

A = Allowed; C = Conditional

This recommendation, based on the retail and food security analysis from Chapter 2, intends to reduce existing pressure on the real estate market to convert retail spaces into housing units, which has led to the loss of several retail spaces in the neighborhood in recent years. Land uses can either be 'Allowed', 'Forbidden', or 'Conditional'. By making residential uses in these commercial districts 'Conditional', it will allow for the Zoning Board of Appeals to deny variances for residential uses on the ground floor in some instances, where a conversion from retail is required, without prohibiting residential uses from occupying ground floors universally, such as in locations where residential is already or historically has been the ground floor.

In the process of making this proposed change to the LC and NS subdistricts of the Charlestown Neighborhood Zoning district, this PLAN also proposes to update the boundaries of the LC and NS districts, to better reflect where retail and residential uses actually exist today, by removing blocks from the LC and NS subdistricts when they are entirely residential on the ground floor. The 'Conditional' designation for residential uses will contain a provision exempting residential uses that existed prior to this zoning modification, but this PLAN seeks to limit the number of parcels which will require this exemption. Figures 182-185 illustrate these proposed boundary changes to the LC and NS subdistricts.

Figure 182. Map of ground floor residential uses in the Charlestown Neighborhood Zoning District's LC and NS subdistricts

Figure 183 (p.211). Map the existing and proposed Main Street NC subdistrict - Northern end

Figure 184 (p.211). Map the existing and proposed Main Street NC subdistrict - Southern end

Figure 185 (p.211). Map the existing and proposed Bunker Hill Street LC subdistrict

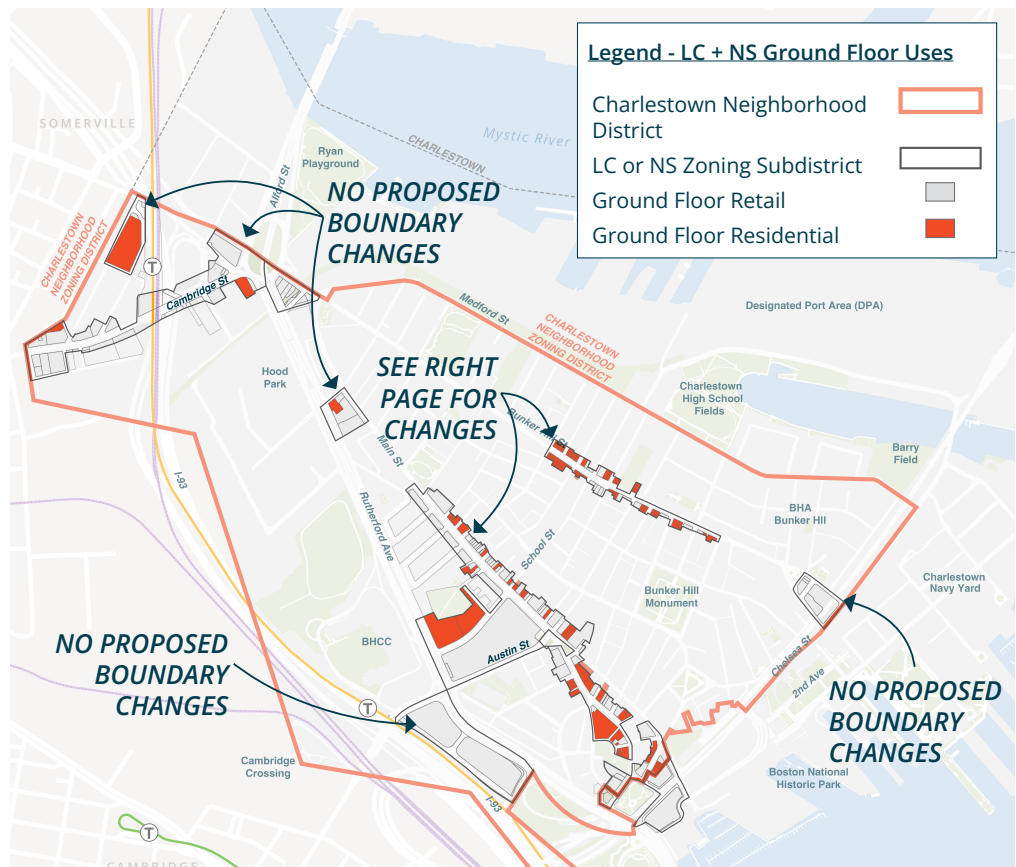
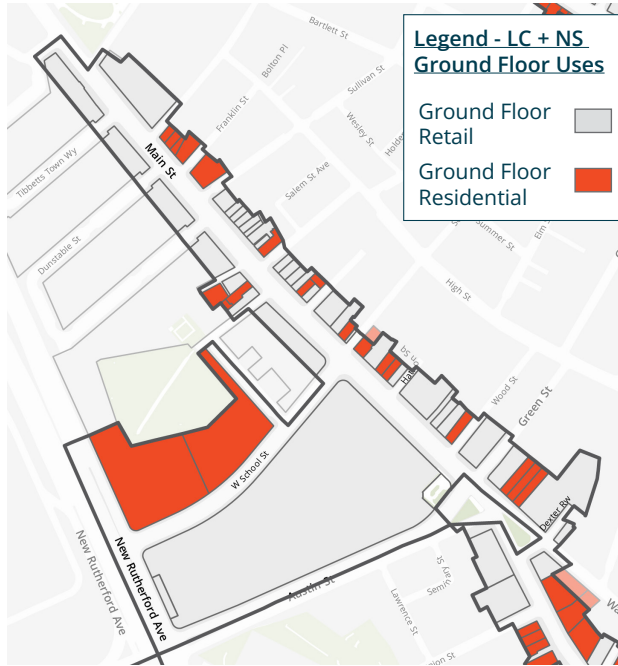


Figure 182

EXISTING

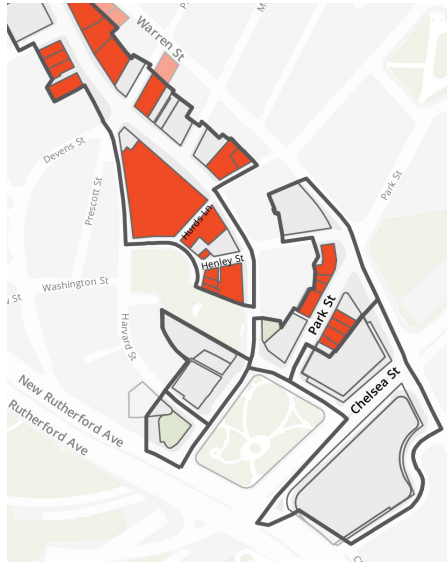


PROPOSED



Figure 183

EXISTING



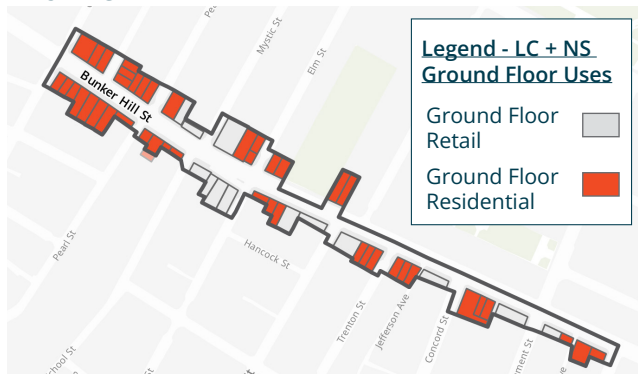
PROPOSED



Example of residential block proposed to be removed from the Neighborhood Shopping (NS) subdistrict

Figure 184

EXISTING



PROPOSED



Figure 185

4. Consolidate the City Square and Charlestown Neighborhood Zoning Districts

Figure 186. City Square District Zoning Map 2D. Boston Zoning Code. Key map and annotations added by the BPDA.

This proposed consolidation will make Charlestown's zoning simpler to use by reducing the number of places property owners need to refer to when trying to understand the rules that govern what can happen on their land. The City Square District (Article 58) was added to Boston's Zoning Code in 1995, 4 years into the Big Dig, as part of the City Square Tunnel creation. The Charlestown Neighborhood District (Article 62) was created the following year, in 1996. The City Square District creation was expedited ahead of the Charlestown Neighborhood District to help facilitate changes that needed to happen during the Big Dig, including the creation of City Square Park. Nearly 30 years later, the City Square District has served its purpose.

City Square has four land use subdistricts, all of which Charlestown also has: Family Residential, Multifamily Residential, Open Space, and Neighborhood Shopping. Dimensionally, the City Square and Charlestown Neighborhood Districts are perfect matches, with the same maximum heights, setbacks, densities, etc.

City Square and Charlestown's allowed land uses are 80% the same. Where there are discrepancies, the Charlestown Neighborhood District's land use table will override. This change will ensure that properties in the same kind of subdistricts are treated the same. For example, if a bakery is allowed in a Neighborhood Shopping subdistrict on Main Street (in the Charlestown Neighborhood District area), it should also be allowed in the Neighborhood Shopping subdistrict on Chelsea Street (in the existing City Square District area).

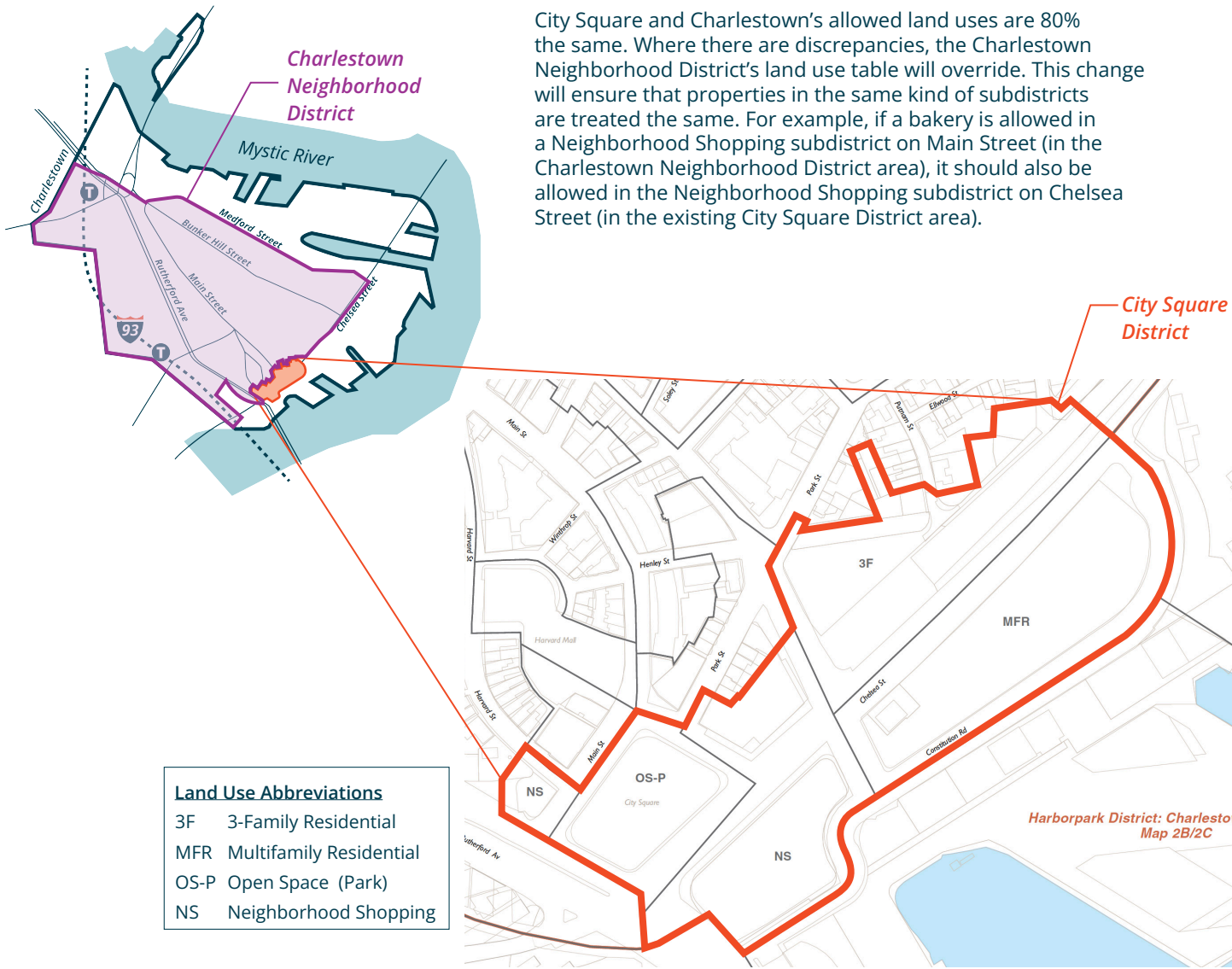


Figure 186

5. Limit garage doors facing public streets

This recommendation from the Urban Design Guidelines Chapter looking at the historically residential parts of Charlestown, aims to slow the erosion of street walls and curbs with garage doors and curb cuts. These elements are monotonous, often require the removal of street trees, and take away from public, on-street parking. Figure 187, below, shows an example of the negative impacts of garage doors facing public streets along Prospect Street in Charlestown, where a row of six garage doors, added at individual properties over time, have caused the removal of several trees and the loss of over a dozen parking spaces.

This change in the zoning code is proposed to be made by adding the following language to the Charlestown Neighborhood District zoning article: “Location of Garage Doors. Within the Residential Subdistricts, garage doors shall not face the Front Lot Line, or Rear Lot Line if facing a public street.”



Figure 187

6. Remove parking minimums for structures with 6 or less housing units, and for 7+ unit structures, update the required parking spaces to be 1 per housing unit

Building on the recommendation above, garage doors are often necessary due to a requirement in the zoning code for a minimum number of off-street parking spaces, related to the number of housing units on a parcel. However, much of Charlestown's built fabric was constructed at a time when very few households owned cars, and so off-street parking and garage doors do not fit well within the built context, often requiring modifications to existing structures. Additionally, the requirement for off-street parking typically triggers the need for new curb cuts, which take away public on-street parking spaces.

While PLAN: Charlestown does acknowledge that parking is necessary, nearly 20% of Charlestown households do not own a car.¹⁶³ As new residents come to Charlestown, an emphasis must be placed on alternative modes of transit, and maintaining both on-street parking and street trees. For these reasons, this PLAN proposes to remove the minimum off-street parking requirement for smaller structures with 6 or fewer housing units, and to reduce the minimum number of spaces required for 7+ unit structures to one space per housing unit, which is on par with the number of vehicles most car-owning households in the neighborhood have.¹⁶⁴

¹⁶³ ACS 2020 5-year estimates. Households with access to a vehicle data.

¹⁶⁴ Ibid.

Figure 187. View of rears of 5-15 Mt. Vernon Street, from Prospect Street, Charlestown, MA. Photo by BPDA staff.

7. Simplify the Neighborhood Design Overlay Districts in the zoning code down to 1, to match the Charlestown Neighborhood District zoning map, 2E

Neighborhood Design Overlay Districts (NDOD) are used in areas with high quality structures, often historic in nature, but where a Landmarks designation does not exist. Design review is performed by BPDA Urban Design staff for projects located within the NDOD which also meet certain thresholds for needing review, such as changing the structure's roof shape, cornice line, street wall height, or building height.

The Charlestown Neighborhood District zoning article (62) describes six NDOD districts; however, the boundaries of these districts are not defined in the code. The accompanying map shows the NDOD as a single, conjoined district. Because on the map they are represented as one, large district rather than six smaller ones, referring to them in the zoning code by six separate names is both unnecessary and confusing to code users. By simplifying the NDOD description from six districts to one, the zoning article will match the zoning map, and be more intuitive to use. This recommendation does not change the boundary of the existing NDOD district, nor does it modify the threshold for NDOD review; it will just make the code easier to read and understand.

8. Simplify Charlestown's 2F and 3F subdistricts by converting the 2F-3000 and 3F-3000 subdistricts to be 3F-2000 subdistricts

The Charlestown Neighborhood District (Article 62) of Boston's zoning code includes three "2F" and "3F", or two-family and three-family residential, subdistricts. They are the 2F-3000, the 3F-2000, and the 3F-3000. The first part of the zoning name tells the user what the maximum number of housing units on a parcel should be. "2F" means two-family, and "3F" means three-family. The second part of the name is a number, which tells the user the minimum parcel size needed in order to develop it. For example, "2000" means parcels must be at least 2,000 square feet.

Figure 188 shows where the 2F-3000, the 3F-2000, and the 3F-3000 residential zoning subdistricts are in Charlestown prior to this PLAN. All of Charlestown 2 and 3-family residential areas are zoned as 3F-2000, with the exception of two blocks. These blocks are treated differently from the rest of the neighborhood, which results in a slightly more suburban build fabric in these two small areas than what many think of as Charlestown.

Example of an existing structure within the 2F-3000 subdistrict

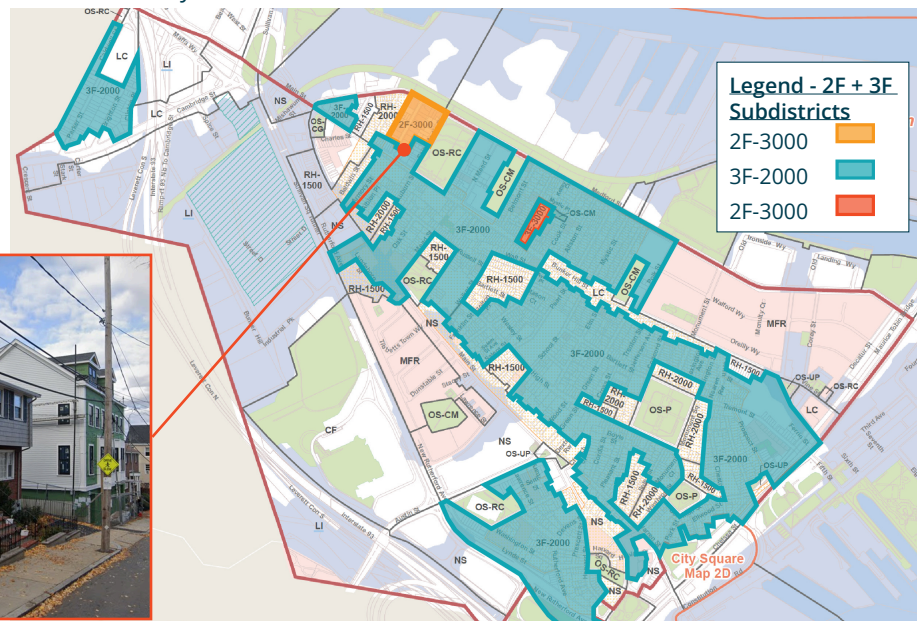


Figure 188

9. Update the rear yard setback requirement for Row House subdistricts to be 15 feet

Zoning is a tool to shape the future of neighborhoods, but often aspects do not reflect the built environment that exists today, and this misalignment can make it difficult or impossible to recreate some of the built forms community members love, like row homes. In the Charlestown Neighborhood District, the rear yard setback requirement for row house residential subdistricts is 25 or 30 feet, depending on if it is an RH-1500 or RH-2000 subdistrict. However, this requirement was put into place after the majority of row houses in Charlestown were built, and in some of these row house subdistricts none of the existing structures are compliant, while in others less than 40% comply. This means that most of these beloved row homes that exist today could not be rebuilt without variances, which is an expensive and time intensive process, and variances are not guaranteed. This is at odds with the goal that zoning allow for the building of structures residents want to see most.

Analysis of row house residential subdistrict areas in Charlestown shows that by decreasing the required rear yard setback from 25-30 feet to 15 feet, up to 70% of existing row houses in these subdistricts could be rebuilt without the need for a rear yard variance. This also means that row house owners would have an easier, simpler process to make modifications to their home, such as adding kitchen additions on the ground floor or adding dormers to their rear facing roofs. Allowing residents in Charlestown to have more control over their homes increases the likelihood that families who live in the neighborhood already will stay, if they can appropriately modify their houses to adjust to new needs.

What is a variance?

A variance is a request to deviate from zoning laws. In Boston, variances are granted by the Zoning Board of Appeals.

What kinds of variances might home owners in Charlestown seek?

Variances are granted for many reasons. A variance might be needed for larger projects like infill construction of a new house, or for small projects, like by a resident who wants to add a dormer to their roof in order to turn their attic into a bedroom. The process to obtain a variance can be expensive and take several months.

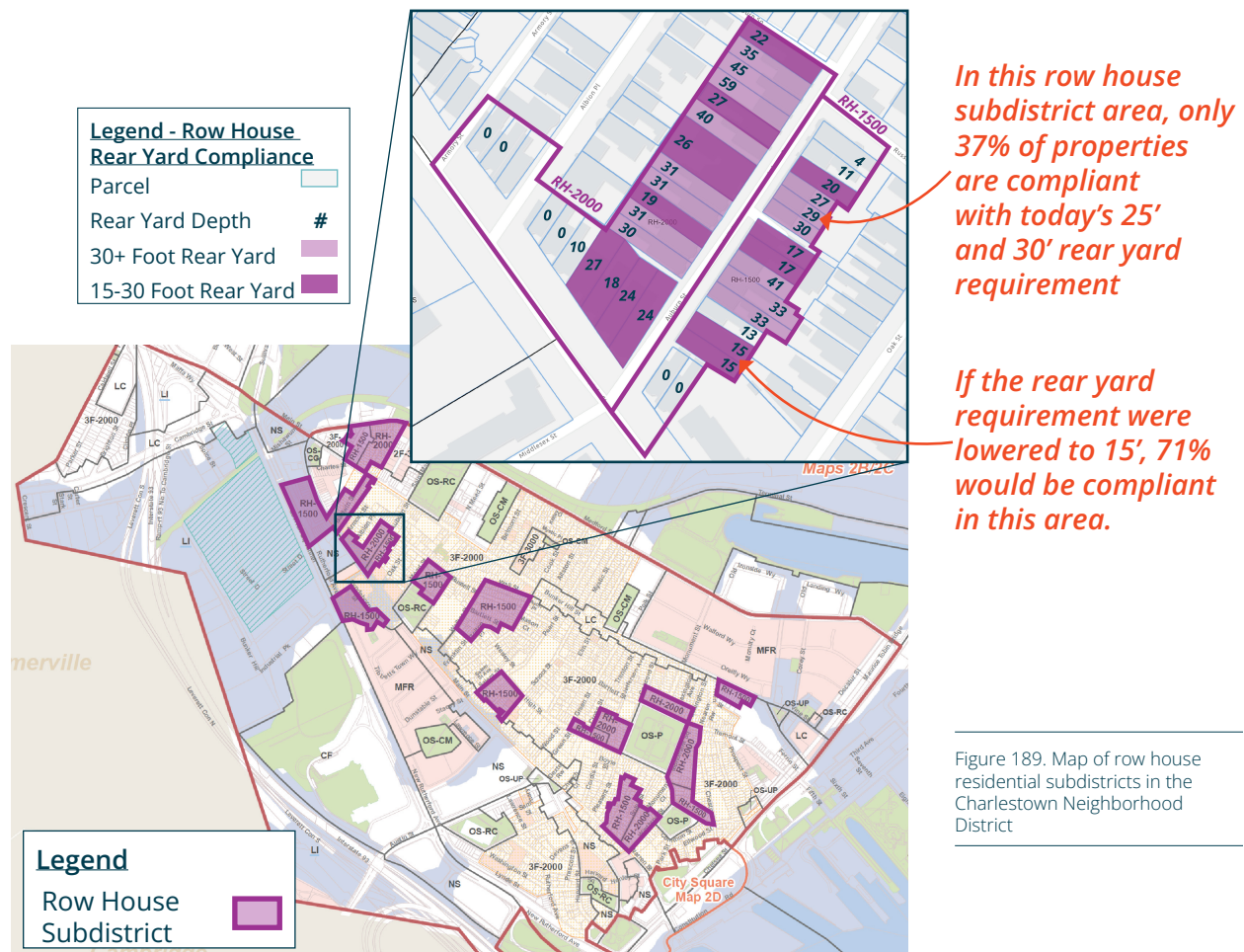


Figure 189. Map of row house residential subdistricts in the Charlestown Neighborhood District

Figure 189

10. Redevelop underutilized parcels, such as the Bunker Hill Mall, which can serve as a transition zone to the growth area, while being mindful of existing neighborhood building heights

The Bunker Hill Mall is a 6 acre site, comprised of multiple parcels, which was previously filed for development review. It is centrally located between Main Street and Rutherford Avenue, and within 1,500 feet of the Orange Line. It is a suburban strip mall-style development that is anchored by a Whole Foods grocery store, an important community asset. A significant portion of the site is dedicated to surface parking, suggesting underutilization of the parcels.

The site faces existing and proposed retail nodes. It serves as a physical transition between higher density, transit-oriented development areas and the historic core. Redevelopment could bolster the identified housing, retail, and open space needs. New underlying zoning may help to facilitate redevelopment.

Zoning shall be modified to reflect changes to Bunker Hill Mall and enable additional density. It is recommended that buildings that face Main Street be limited to 40 feet in height, and buildings that face Rutherford Avenue be limited to 70 feet in height. The site shall reflect an FAR of 2.0 and shall not be PDA-eligible to preserve continuity of scale with existing buildings in the immediate area.

Recommendations Table

RECOMMENDATIONS INVENTORY

The recommendations from each chapter of this PLAN are consolidated here, and organized by theme and objective, with the implementation timeline, implementing departments and agencies, and strategies identified.

Theme

The recommendations are grouped by shared themes. The themes are 1) Affordable housing; 2) Arts & culture; 3) Climate Resiliency; 4) Community vibrancy; 5) Economic development; 6) Health & safety; 7) Infrastructure; 8) Mobility; 9) Open space; 10) Predictable and contextual growth; and 11) Preservation

Objective

Each recommendation includes an objective describing the goal the recommendation is meant to accomplish.

Timeline

The recommendations are identified as being achievable either in the Short-term (1-3 years), Mid-term (4-10 years), or Long-term (10-30 years), with those which have already been commenced labeled as 'Ongoing'.

Strategy

There are many levers to pull in order to implement planning recommendations. Policy, capital improvements funded by the City's budget, updated zoning, development review and associated mitigation, and state and federal grants and programs are all potential tools providing implementation pathways.

Implementing Departments / Agencies:

- Boston Children Youth and Families (BCYF)
- Boston Emergency Medical Services (EMS)
- Boston Fire Department (BFD)
- Boston Landmarks Commission
- Boston Office of Early Childhood (OEC)
- Boston Office of Economic Opportunity and Inclusion (OEI)
- Boston Office of Emergency Management (OEM)
- Boston Office of Small Business Development (OSBD)
- Boston Office of Urban Agriculture (GrowBoston)
- Boston Parks and Recreation Department (BPRD)
- Boston Planning and Development Agency (BPDA)
- Boston Police Department (BPD)
- Boston Public Facilities Department (PFD)
- Boston Public Library (BPL)
- Boston Public Schools (BPS)
- Boston Transportation Department (BTD)
- Boston Water and Sewer Commission (BWSC)
- City of Boston Public Facilities Department (PFD)
- City of Boston Public Works Department (PWD)
- Climate Ready Boston (CRB)
- Lower Mystic TMA (LMTMA)
- Mayor's Office of Arts and Culture (MOAC)
- Mayor's Office of Food Justice (MOFJ)
- Mayor's Office of Housing (MOH)
- Massachusetts Bay Transit Authority (MBTA)
- Metropolitan Area Planning Commission (MAPC)

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
1	THEME: AFFORDABLE HOUSING				
1a	Ch 2; Sec 2: Housing	Increase affordable housing supply	Update the zoning code to allow housing densities that will encourage the creation of affordable housing	Mid-term	BPDA, Zoning Commission, MOH
1b	Ch 2; Sec 2: Housing	Increase affordable homeownership opportunities	Build new affordable homeownership units for below median-income households	Long-term	BPDA, MOH, private partners
1c	Ch 2; Sec 2: Housing	Increase housing opportunities for all family types	Prioritize the creation of housing units with 3+ bedrooms for larger households	Long-term	BPDA, MOH, private partners
1d	Ch 2; Sec 2: Housing	Reduce housing discrimination	Use Boston's Affirmatively Furthering Fair Housing zoning ordinance to strengthen fair housing and anti-discrimination efforts	Ongoing	MOH
1e	Ch 3: SS+RA Planning Framework	Increase affordable housing supply	Utilize city land for affordable and mixed income housing development	Mid-term	BPDA, MOH
1f	Ch 3: SS+RA Planning Framework	Increase affordable housing supply	Update zoning with a density bonus for housing around MBTA stations	Short-term	BPDA, Zoning Commission
2	THEME: ARTS AND CULTURE				
2a	Ch 2; Sec 7: Arts + Culture	Create more opportunities for public art	Add public art in Charlestown, with attention to the historic core, the Lost Village, Navy Yard and areas west of Rutherford Avenue; include art at GoHubs!	Mid-term	MOAC, BAC, private partners
2b	Ch 2; Sec 7: Arts + Culture	Make arts and culture opportunities more accessible	Update zoning to reduce restrictions on arts and culture uses in Multifamily Residential (MFR), Local Convenience (LC), Neighborhood Shopping (NS), and Local Industrial (LI) subdistricts across the neighborhood	Short-term	BPDA, Zoning Commission
2c	Ch 2; Sec 7: Arts + Culture	Protect local artists	Identify gaps Citywide in affordable work space for various creative uses - especially for uses that are currently at risk of losing space or cost-burdened - to ensure the long-term viability of the arts and culture economy in the City	Short-term	MOAC, BPDA, private partners
2d	Ch 2; Sec 7: Arts + Culture	Secure creative spaces	MOAC should continue to participate in development review to ensure that the spatial and programming needs of arts and culture uses are considered and accommodated in new private development. The creation of more artist work space and affordable musician rehearsal space are priorities	Ongoing	MOAC, BPDA
2e	Ch 2; Sec 7: Arts + Culture	Secure cultural infrastructure	Implement the coming recommendations of the MAPC's Making Space for Art study	Short-term	MAPC, MOAC, private partners
2f	Ch 2; Sec 7: Arts + Culture	Support existing artists	Maintain existing cultural assets and artist presence in Charlestown	Long-term	MOAC
3	THEME: CLIMATE RESILIENCY				
3a	Ch 2; Section 3: Open Space	Increase tree canopy	Add street trees in Charlestown, focusing on the highest priority areas through the Urban Forest Plan, and existing empty tree pits	Mid-term	BPRD, PIC, BTD

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
3b	Ch 2; Section 3: Open Space	Increase tree canopy	Prioritize the preservation and growth of trees on private land in development design review	Long-term	BPDA, private partners
3c	Ch 2; Section 3: Open Space	Prepare Charlestown for extreme heat	Provide high quality open space with a focus on currently underserved areas with less park access, higher vulnerability to extreme heat, and less tree canopy	Long-term	BPRD, private partners
3d	Ch 2; Section 3: Open Space	Utilize green infrastructure for recreation and resiliency	Ensure that planned flood resilience infrastructure in Charlestown serves the dual purposes of active and passive recreation	Long-term	PIC, BPDA, Climate Ready Boston, PWD, BCC
3e	Ch 2; Sec 4: Climate Resilience	Prepare Charlestown for climate change	Continue the implementation of Climate Ready Boston's coastal and heat resilience recommendations (Climate Ready Charlestown Phase I & II) and Green Infrastructure features throughout the neighborhood	Ongoing	PIC, BPDA, CRB, BCC, private partners
3f	Ch 2; Sec 4: Climate Resilience	Prepare Charlestown for climate change	Continue coordination with State, Federal, and Private Partners on the implementation of climate adaptation and mitigation measures that serve the public good	Ongoing	PIC, BPDA, CRB, MBTA, NPS, private partners
3g	Ch 3: Scenarios + Zoning	Utilize green infrastructure for recreation and resiliency	Make a more public, green, and resilient waterfront along the Mystic River	Mid-term	CRB, BPDA, BPRD, PWD, private partners
4	THEME: COMMUNITY VIBRANCY				
4a	Ch 2; Sec 5: Retail + Food Security	Ensure food security for all residents	Support Harvest on Vine and other local food pantries and fresh food providers' operations as needed through development mitigation	Long-term	MOFJ, GrowBoston, private partners
4b	Ch 2; Sec 5: Retail + Food Security	Ensure food security for all residents	Advocate for developments to incorporate rooftop or ground level community garden plots in new residential development to enhance fresh food access in the neighborhood	Mid-term	GrowBoston, BPDA, private partners
4c	Ch 2; Sec 5: Retail + Food Security	Ensure food security for all residents	Advocate for the inclusion of a new grocery store in the neighborhood	Short-term	MOFJ, BPDA, private partners
4d	Ch 2; Sec 5: Retail + Food Security	Maintain high quality public amenities	Facilitate a walkable retail environment with less need cars to access essential services	Long-term	BPDA, PWD, BTD, private partners
4e	Ch 2; Sec 9: Nbhd Services - Community Centers	Create and maintain an age-friendly community	Allocate more funding towards senior programming as new senior housing is added in the neighborhood	Long-term	BCYF
4f	Ch 2; Sec 9: Nbhd Services - Community Centers	Create community and cultural spaces	New developments proposing community space should begin coordination with BCYF early in the development review process, in order to ensure it meets the needs of the community	Long-term	BCYF, BPDA, private partners
4g	Ch 2; Sec 9: Nbhd Services - Community Centers	Expand digital access	BCYF should undertake a citywide technology needs assessment	Long-term	BCYF, PFD

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
4h	Ch 2; Sec 9: Nbhd Services - Community Centers	Supply needed community space	BCYF community facilities in Charlestown should prioritize the addition and retention of multipurpose spaces to maintain flexibility as Charlestown's population grows and changes	Mid-term	BCYF, PFD
4i	Ch 2; Sec 9: Nbhd Services - Community Centers	Supply needed community space	The BCYF facilities assessment should consider both the current and future population of Charlestown	Long-term	BCYF, PFD
4j	Ch 2; Sec 9: Nbhd Services - Public Library	Maintain high quality public amenities	Reevaluate the needs of the Charlestown Branch Library at regular intervals as development in the neighborhood occurs	Long-term	BPL
4k	Ch 2; Sec 9: Nbhd Services - Public Library	Maintain high quality public amenities	The strategic plan for BPL should consider future population, in addition to current and emerging needs	Short-term	BPL
4l	Ch 2; Sec 9: Nbhd Services - Public Schools	Provide high quality education for all children	Study reconfiguring the Warren-Prescott School by converting it from a K-8 to a K-6, opening and up new elementary school level classrooms. 7th and 8th grade students could be served at Charlestown High School or in several other 7-12 schools across the District with capacity	Mid-term	BPS, PFD
4m	Ch 2; Sec 9: Nbhd Services - Public Schools	Provide high quality education for all children	Continue to collaborate with the Office of Early Childhood to open up new early childhood seats in family child care centers for infants and toddlers to accommodate projected population growth of 0-4 year olds	Ongoing	BPS, OEC, BPDA
4n	Ch 2; Sec 9: Nbhd Services - Public Schools	Provide high quality education for all children	Continue to work with the Horace Mann School community to identify a permanent location, and begin conversations with the broader Charlestown community to consider future educational uses of the Edwards School building	Ongoing	BPS, PFD
5	THEME: ECONOMIC DEVELOPMENT				
5a	Ch 2; Sec 5: Retail + Food Security	Encourage retail development	Make residential uses 'Conditional' in the zoning code in Local Convenience (LC) and Neighborhood Shopping (NS) subdistricts, to reduce competition between land uses	Short-term	BPDA, Zoning Commission
5b	Ch 2; Sec 5: Retail + Food Security	Encourage retail development	Encourage developers to include retail facilities, especially as the areas West of Rutherford Avenue change. Essential facilities should be given preference: a grocery store, fitness establishments, pharmacies, and clinics	Long-term	BPDA, OSBD, MOFJ, BPHC, private partners
5c	Ch 2; Sec 5: Retail + Food Security	Encourage retail development	Encourage developers to support or provide needed off-site retail as part of their mitigation package to parts of the neighborhood in need of more essential retail options	Long-term	BPDA, OSBD, OEIO, private partners
5d	Ch 3: SS+RA Planning Framework	Encourage retail development	Encourage a mixed-use neighborhood with new retail nodes	Long-term	BPDA, private partners
5e	Ch 6: Navy Yard	Support local businesses	Identify opportunities to increase economic development in the Navy Yard, especially among small businesses and local artists	Mid-term	BPDA, OEIO, MOAC, private partners

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
5f	Ch 3: SS+RA Planning Framework	Encourage retail development	Zoning changes and individual development projects should incorporate affordable commercial rents to support locating small businesses in the neighborhood	Mid-term	BPDA, OEOI, OSBD, private partners
5g	Ch 3: SS+RA Planning Framework	Encourage retail & housing development	Facilitate zoning that will encourage redevelopment of underutilized spaces like the Bunker Hill Mall for the purposes of addressing identified needs	Mid-term	BPDA, private partners
6	THEME: HEALTH AND SAFETY				
6a	Ch 2; Sec 9: Nbhd Services - Emergency Management	Strengthen emergency response	If additional emergency shelter capacity is required over time, study the designation potential of the Edwards School and the Warren-Prescott School	Long-term	OEM, PFD, BPS
6b	Ch 2; Sec 9: Nbhd Services - Emergency Management	Strengthen emergency response	OEM will continue to evaluate egress and emergency response plans for Charlestown overtime as the population continues to grow and change	Ongoing	OEM
6c	Ch 2; Sec 9: Nbhd Services - Emergency Management	Strengthen emergency response	Coordinate with OEM to assess how to mitigate project impacts to overall emergency response across city departments	Ongoing	OEM, BTD, BED, private partners
6d	Ch 2; Sec 9: Nbhd Services - EMS	Strengthen emergency response	The BPDA and EMS should add a second ambulance bay to allow the placement of a second ambulance in Charlestown	Short-term	BPDA, EMS, PFD
6e	Ch 2; Sec 9: Nbhd Services - EMS	Strengthen emergency response	Boston EMS should annually evaluate the call volumes in Charlestown to assess if a third EMS station is warranted in the neighborhood	Mid-term	EMS
6f	Ch 2; Sec 9: Nbhd Services - Fire	Strengthen emergency response	Charlestown's fire companies should be trained in Tech Rescue	Short-term	BFD
6g	Ch 2; Sec 9: Nbhd Services - Fire	Strengthen emergency response	Call volume trends should be monitored over the next two to three decades in Charlestown to determine if and when Charlestown might need its own District Chief or when an additional fire station might be necessary. A new station could be located along Medford Street or west of Rutherford Avenue	Long-term	BFD
6h	Ch 2; Sec 9: Nbhd Services - Fire	Strengthen emergency response	The addition of a dedicated marine asset should be studied as Charlestown's waterfront develops	Mid-term	BFD, PFD
6i	Ch 2; Sec 9: Nbhd Services - Police	Strengthen emergency response	The City should perform a facilities and staffing study of the Charlestown A-15 police station to determine what upgrades would be needed to make the station a fully operational facility	Long-term	BPD, PFD
6j	Ch 2; Sec 9: Nbhd Services - Police	Strengthen emergency response	As population increases, additional officers should be added to area A, using call volume to determine staffing needs	Long-term	BPD
6k	Ch 2; Sec 9: Nbhd Services - Police	Strengthen emergency response	Funding for police programs should be designated when projects are permitted, in order to be proactive	Long-term	BPD, BPDA

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
6l	Ch 2; Sec 9: Nbhd Services - Police	Support community programs	Identify and support drug addiction recovery programs, youth services, and other community programs through funding and other means. Examples of current programs in Charlestown are run by the Charlestown Coalition and Harvest on Vine	Long-term	BPHC
7	THEME: INFRASTRUCTURE				
7a	Ch 2; Sec 9: Nbhd Services -Water + Sewer	Maintain necessary sewer capacity	Continue to enforce the Inflow Infiltration Reduction (IIR) requirement for new developments	Ongoing	BWSC
7b	Ch 2; Sec 9: Nbhd Services -Water + Sewer	Maintain necessary sewer capacity	Developers will be responsible for building their own local sewer lines, and also increasing the sewer capacity if needed	Long-term	BWSC, private partners
7c	Ch 2; Sec 9: Nbhd Services -Water + Sewer	Replace outdated infrastructure	Continue to work to replace the Combined Sewers where they still exist	Ongoing	BWSC, PWD
8	THEME: MOBILITY				
8a	Ch 2; Sec 8: Mobility	Improve street life and safety	Establish smaller residential permit parking zones that separate the Original Peninsula, Navy Yard, and Lost Village from the areas where growth is planned	Short-term	BTD, Parking Clerk
8b	Ch 2; Sec 8: Mobility	Improve street life and safety	Require strong transportation demand management (parking maximums, Bluebikes, public carshare, etc.) in all development projects	Ongoing	BTD, BPDA, private partners
8c	Ch 2; Sec 8: Mobility	Improve street life and safety	Establish design standards for new streets and apply them to a new multimodal street network to support development west of Rutherford Avenue	Short-term	BTD, BPDA, PIC, Disabilities Commission
8d	Ch 2; Sec 8: Mobility	Improve street life and safety	Leverage the many ongoing infrastructure and development projects (Rutherford Avenue/Sullivan Square Redesign, Gilmore Bridge, Cambridge St Bridge, etc.) to address Charlestown's safety, resilience, accessibility, and transit access needs. As projects move from planning to design and implementation, information community conversations and analysis developed through PLAN: Charlestown should be referenced and incorporated into projects.	Ongoing	BTD, PWD, BPDA, MassDOT, MBTA
8e	Ch 2; Sec 8: Mobility	Improve street life and safety	Conduct deeper studies of key corridors in Charlestown including Main Street, Medford Street, Bunker Hill Street, Chelsea Street, and Austin Street and develop plans for future implementation. Corridor planning efforts should provide design and policy solutions to improve safety and accessibility, create stronger multimodal connections for people walking, biking, and taking transit, managing the curb, and addressing urban heat island through green infrastructure. Determine funding options for studies and implementation, which may include development mitigation, federal/state grants, or working through the City capital budgeting process	Mid-term	BTD, BPDA, PWD, Disabilities Commission

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
8f	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Expand publicly-accessible, secure bike parking at MBTA stations and in the historic core	Short-term	MBTA, BTD
8g	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Evaluate high-use bus stops throughout the neighborhood for addition of shelters, real-time arrival info, benches, trash cans, etc.	Short-term	BTD, MBTA, BTD, PIC
8h	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Provide accessible neighborhood shuttle services that stop throughout the neighborhood and at both Orange Line stations	Mid-term	BTD, private partners
8i	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Preserve transit service along the full length of Main St.	Mid-term	MBTA, BTD
8j	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Evaluate potential locations for new connections to Sullivan Square Station from the Lost Village	Mid-term	MBTA
8k	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Advocate for transit priority (bus lanes and signal priority) along Charlestown's gateways including around Sullivan Square, the Gilmore Bridge, and in both directions on the N. Washington Street bridge	Short-term	BTD, MBTA, MassDOT
8l	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Establish a neighborhood bike network that connects riders of all ages and abilities to neighborhood destinations throughout Charlestown and to adjacent neighborhoods. Ensure all new development is accessible along streets that are comfortable for people biking	Long-term	BTD, PWD
8m	Ch 2; Sec 8: Mobility	Expand multi-modal transportation options	Expand shared mobility options in Charlestown including public carshare to better support occasional drivers, public electric-vehicle charging stations to promote a zero-emission vehicle future, and bikeshare stations to facilitate quick trips within the neighborhood	Ongoing	BTD, BPDA
8n	Ch 2; Sec 8: Mobility	Improve street life and safety	Study existing one-way street patterning between Medford Street and Bunker Hill Street, taking into consideration transportation equity and practicality for people biking and driving	Mid-term	BTD, BPDA
8o	Ch 2; Sec 8: Mobility	Improve street life and safety	Evaluate skewed intersections (i.e. intersections that don't meet at right angles) throughout the neighborhood to identify potential safety, sustainability, and operational benefits. Key intersections that should be considered for reconfiguration include Main street at Austin Street; Prescott Street at Harvard Street; Warren Street at Park Street and Henley Street; Common Street at Adams Street; and Bunker Hill Street at Vine Street and Tufts Street	Mid-term	BTD, PWD, MassDOT, Environment, PIC
8p	Ch 2; Sec 8: Mobility	Increase transit access	Target growth close to the Orange Line through zoning reform	Short-term	BPDA, Zoning Commission

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
8q	Ch 2; Sec 8: Mobility	Improve street life and safety	Adjust the maximum parking ratios currently enforced by the Boston Transportation Department to reflect both the scale of growth anticipated, major planned investments in transit, and Charlestown's unique roadway constraints. The parking ratios proposed are: Residential (Condo): 0.6/unit; Residential (rental): 0.4/unit; Retail >5,000 sf: 0.4/1,000 sf; Retail <5,000 sf: 0.2/1,000 sf; Hotel: 0.2/room; Office / Lab: 0.4/1,000 sf; Institutional: 0.4/1,000 sf; Industrial: 0.3/2,500 sf	Short-term	BTD, BPDA
8r	Ch 2; Sec 8: Mobility	Increase transit access	Study the addition of a Sullivan Square Commuter Rail Station	Long-term	MBTA, BTD, BPDA
9	THEME: OPEN SPACE				
9a	Ch 2; Section 3: Open Space	Enable an active and healthy lifestyle for all residents	Add 2 new, publicly accessible multi-use soccer/ lacrosse fields and sport practice areas by 2050	Long-term	BPRD, private partners
9b	Ch 2; Section 3: Open Space	Ensure longevity of open space	Private developments should include measures to permanently protect the open spaces they create through easements, deed restrictions, land transfers to the Parks Dept. or other means	Mid-term	BPRD, BPDA, private partners
9c	Ch 2; Section 3: Open Space	Increase walkability at the Navy Yard	Use signage and landscaping to draw users to the Harborwalk and develop an interpretive signage system to explain the maritime industrial and related uses. Fill the missing links in the Harbor walk	Ongoing	BPDA
9d	Ch 2; Section 3: Open Space	Add needed open space	Create new open space as the population of Charlestown increases	Long-term	BPRD, private partners
9e	Ch 3: SS+RA Planning Framework	Enable an active and healthy lifestyle for all residents	Coordinate the creation of a public 3+ mile green loop around Charlestown, across private and publicly-owned parcels	Long-term	BPDA, BTD, PWD, private partners
9f	Ch 3: SS+RA Planning Framework	Add needed open space	Extend Doherty Park towards the Mystic River	Mid-term	BPDA
9g	Ch 3: SS+RA Planning Framework	Add needed open space	Add 25+ Acres of open space to the neighborhood on a mix of public and privately owned land	Long-term	BPDA, BPRD
9h	Ch 2; Section 3: Open Space	Improve existing open space	Complete Ryan Playground Improvements and the Charlestown High School Track and Field replacement	Ongoing	BPRD, BPS, BCYF
9i	Ch 3: SS+RA Planning Framework	Add needed open space	Should DPA designation be removed by the state from industrial parcels in the norther section of the neighborhood, City should work to ensure parcels for open space and/or ensure that developments that open spaces for public use	Long-term	BPDA
10	THEME: PREDICTABLE AND CONTEXTUAL GROWTH				
10a	Ch 2; Sec 2: Housing	Disperse density	Focus the growth of housing units in the historically industrial areas, where housing density is low today	Long-term	BPDA, Zoning Commission

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
10b	Ch 3: SS+RA Planning Framework	Buffer less desirable land uses	Allow for increased building height and density along I-90 to buffer the neighborhood.	Short-term	BPDA, Zoning Commission, private partners
10c	Ch 3: SS+RA Planning Framework	Buffer less desirable land uses	Buffer industrial uses around the MBTA bus yard with commercial uses where possible	Short-term	BPDA, Zoning Commission
10d	Ch 3: SS+RA Planning Framework	Encourage transit-oriented development	Increase allowed density around transit hubs	Short-term	BPDA, Zoning Commission, private partners
10e	Ch 4: Urban Design Guidelines for RA + SS	Preserve and create a sense of place	All future developments in the Sullivan Square and Rutherford Avenue areas should adhere to the Urban Design Guidelines included in Chapter 4 of this PLAN	Long-term	BPDA, private partners
10f	Ch 5: Urban Design Guidelines for OP + LV	Improve the public realm	Limit garage doors facing public streets	Short-term	BPDA, Zoning Commission
10g	Ch 5: Urban Design Guidelines for OP + LV	Preserve and create a sense of place	All future developments and building modifications in the Original Peninsula and Lost Village areas should adhere to the Urban Design Guidelines included in Chapter 5 of this PLAN	Long-term	BPDA, private partners
10h	Ch 5: Urban Design Guidelines for OP + LV	Simplify the zoning code	Consolidate the City Square and Charlestown Neighborhood Zoning Districts to provide more consistent regulation	Short-term	BPDA, Zoning Commission
10i	Ch 5: Urban Design Guidelines for OP + LV	Simplify the zoning code	Simplify the Neighborhood Design Overlay District in the written zoning code from 7 districts down to 1, to match the Charlestown Neighborhood District zoning map, 2E	Short-term	BPDA, Zoning Commission
10j	Ch 5: Urban Design Guidelines for OP + LV	Simplify the zoning code	Simplify Charlestown's 2F and 3F subdistricts by converting the 2F-3000 and 3F-3000 subdistricts to be 3F-2000 subdistricts	Short-term	BPDA, Zoning Commission
10k	Ch 5: Urban Design Guidelines for OP + LV	Update zoning to allow built forms residents love	Remove parking minimums for structures with 6 or less housing units, and for 7+ unit structures, update the required parking spaces to be 1 per housing unit	Short-term	BPDA, Zoning Commission
10l	Ch 5: Urban Design Guidelines for OP + LV	Update zoning to allow built forms residents love	Update the rear yard setback requirement for Row House subdistricts to be 15 feet	Short-term	BPDA, Zoning Commission
10m	Ch 6: Navy Yard	Preserve and create a sense of place	All new development in the Charlestown Navy Yard should adhere to the urban design guidelines for the Historic Monument Area and New Development Area within the Navy Yard per the 1977 Program for Preservation and Utilization	Long-term	BPDA, private partners
10n	Ch 1: Demographics	Preserve and create a sense of place	Avoid displacement of low-income residents and small business owners	Long-term	E&I, MOH, BPDA, private partners

#	Chapter + Section	Objective	Recommendation	Timeline	Implementing Entities
10o	Ch 1: Demographics	Preserve and create a sense of place	Incorporate programming in Languages Other Than English	Long-term	BHA, private partners
11	THEME: PRESERVATION				
11a	Ch 2; Sec 6: Preservation	Preserve and promote history	OHP and MHC should continue to nominate landmarks in Charlestown to the National Register of Historic Places	Long-term	OHP, MHC
11b	Ch 2; Sec 6: Preservation	Preserve and promote history	OHP should continue to review landmark and district petitions submitted by the community	Long-term	OHP
11c	Ch 2; Sec 6: Preservation	Preserve and promote history	Complete an updated inventory of historic resources in Charlestown	Mid-term	OHP
11d	Ch 2; Sec 6: Preservation	Preserve and promote history	As part of larger zoning reform, the City of Boston will study Article 85 and other preservation strategies on a citywide basis	Mid-term	BPDA, OHP
11e	Ch 2; Sec 6: Preservation	Preserve and promote history	Development projects that request relief from the ZBA should consider historic character in the Original Peninsula and Lost Village	Short-term	Private partners
11f	Ch 2; Sec 6: Preservation	Preserve and promote history	OHP should continue the process of the designation of Monument Square district, once the study report is complete	Short-term	OHP

Charlestown Community Impact Fund (CCIF)

The Charlestown Community Impact Fund came about from the 2016 Surrounding Community Agreement (SCA) as a condition of the Massachusetts Gaming Commission's gaming license approval. This municipal trust fund was created for the purpose of complying with M.G.L. ch. 23K, s. 15(9). When the SCA was signed by the City of Boston and Wynn MA, LLC, a one-time \$1 million payment was made and has been distributed to support over 60 Charlestown nonprofits.

Following the casino's opening and throughout the 15 year license term, an annual \$2 million payment is made by Wynn MA, LLC (Encore Boston Harbor) to the City, whose purpose as described in the SCA shall include: 1) Improvements to facilities within the City to facilitate water transportation and to fund staffing and other public safety initiatives related to increased use of water transportation in Boston Harbor related to the [casino] project; 2) Support of Charlestown's non-profits, parks, after-school activities, senior programs, job training programs, cultural events and related activities that promote Charlestown's heritage, quality of life, recreational and cultural activities; 3) Staffing and other public safety initiatives related to increased pedestrian and vehicular traffic in the City related to [casino] project following opening; or 4) Any other impacts including any transportation impacts and the SSIP (Sullivan Square Infrastructure Project).

The CCIF intends to support projects that are transformational and lasting, and to be enjoyed by all of Charlestown. As such, the following is a list of recommendations that have been articulated in this plan which could be utilized by this fund:

- Chapter 2: Neighborhood Needs Analysis (p.104/Recommendation 6l): "Drug addiction recovery programs, youth services, and other community programs are key to crime prevention and building healthy communities. Identify and support these services through funding and other means. Charlestown Coalition is crucial for the youth services and drug/addiction recovery programs it offers. Harvest on Vine is crucial for its food distribution work."
- Chapter 2: Mobility (p.95/Recommendation 8h): " Provide accessible neighborhood shuttle services that stop throughout the neighborhood and at both Orange Line stations"
- Chapter 2: Neighborhood Needs Analysis (p. 107/Recommendation 4e): "More funding in Charlestown should be allocated towards senior programming, especially if any new senior housing is added in the neighborhood."
- Chapter 2: Preservation (p. 69/Recommendation 11c): " Complete an updated inventory of historic resources in Charlestown."
- Chapter 2: Neighborhood Needs Analysis (p. 104): "BPD and the Boston Public Facilities Department should perform a facilities and staffing study of the Charlestown A-15 police station to determine what upgrades would be needed to make the A-15 station a fully operational facility. A focus should be on clinicians and youth services, and consider other assets, such as rapid response vehicles."
- In line with the mobility recommendations of this plan, other potential projects include: Medford Street Bicycle and Pedestrian Improvements between Belmont and Polk Street; bus stop priority improvements, particularly on new Bus Network Redesign routes, including Austin Street, Gilmore Bridge, Community College Station, etc.; planning and design funds for pedestrian connections under I-93; and planning and design funds for Sullivan Square Commuter Rail Station

APPENDICES

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Appendix A

City Departments - Key Programs + Policies

This PLAN's needs analysis and recommendations consider both who the implementing City and State departments would be, as well as what programs and policies are already in place, so that recommendations are not redundant to existing work. This appendix lists the departments and agencies who collaborated on PLAN: Charlestown and who will be participating in its implementation. It also describes some of the key programs and policies of each which are relevant to Charlestown.

BOSTON CULTURAL COUNCIL

Boston Cultural Council (BCC) collaborates with MOAC to administer annual grants to local nonprofits that offer arts and culture programming in the City. In 2023, the BCC awarded 160 arts and cultural institutions in Boston a total of \$626,000 in grants. The BCC annually distributes grants for “general operating support to organizations with budgets under \$2 million that offer arts or cultural programming in Boston, and helps to ensure that the City’s grantmaking responds to the needs of the cultural community.” The funds come from several sources including the Massachusetts Cultural Council, City funds, and donations from private organizations.

BOSTON HOUSING AUTHORITY

The Boston Housing Authority is responsible for managing the city's 12,000-plus public rental housing units and nearly the same number of rental assistance vouchers, housing or supporting more than 55,000 residents. Approximately X BHA units are in Charlestown. To ensure they remain healthy and safe, as well as affordable, homes, the BHA invests in capital repairs and renovations. The BHA also makes accessibility improvements to better serve seniors and persons with disabilities. Newer efforts include investing in fossil fuel-free heating and cooling infrastructure and decarbonization of units

BOSTON OFFICE OF ECONOMIC OPPORTUNITY AND INCLUSION (OEI)

The Office of Economic Opportunity and Inclusion (OEI) works to repair economic harm and help build generational wealth, foster local talent, create thriving and healthy neighborhoods, establish equitable procurement strategies, and strengthen partnerships between the City and local organizations and businesses.

BOSTON OFFICE OF SMALL BUSINESS DEVELOPMENT

The Office of Small Business Development (OSBD) supports small businesses and entrepreneurs in Boston by offering tools, guidance, and resources to start, grow, and build their businesses in the City.

ReStore Boston

ReStore Boston is a program offering resources and design services for signage and storefront improvements for small retail businesses in commercial districts. The program includes storefront design assistance, grants for signs, and matching grants for exterior design and renovation of commercial buildings, covering everything from siding and windows to lighting and awnings.

The Childcare Entrepreneur Fund

This fund is intended to expand high quality early education and care across Boston by helping Family Child Care providers sustain and grow their businesses through grants and business support.

The Legacy Business Program

A “Legacy Business” is defined as a long standing brick and mortar business and independent enterprises that make a strong contribution to community character. The goal of this program is to ensure legacy businesses avoid displacement, grow, keep residents employed, and continue to enrich the City. In 2023, OEI offered grants to nonprofit organizations currently working with small legacy businesses across Boston.

The Outdoor Dining Program

This program seeks to help restaurants expand their seating capacity with outdoor dining patios. Permitting is managed through an online application portal. New features in 2023 included outdoor dining consultations, accessible design templates, real-time application tracking, and annual license renewals.

BOSTON PARKS AND RECREATION DEPARTMENT (BPRD)

The Boston Parks and Recreation Department (BPRD, or ‘Parks Department’) is responsible for maintaining City owned parks and recreation spaces, including playgrounds and sports fields, squares, cemeteries, urban wilds, and street trees. In total, this open space comprises 2,346 acres across Boston. The Parks Department has many functions, including:

- Activation of parks with free public events such as concerts and exercise classes, sports clinics, and art classes, and issues permits for use of City parks.
- Approving or denying all tree removal requests for trees on public land in the City.
- Park design and construction. Current projects in Charlestown include:
 - Ryan Playground Improvements and
 - The Charlestown High School Track and Field Replacement project intends to replace the turf for a new football field/multi-purpose field, replace the track, and add new water filling stations.
- Review of Article 80 projects with the BPDA and commenting on all planning initiatives led by the BPDA.
- Parks planning for the City. Includes the (1) 2023-2029 Open Space and Recreation Plan, a 7-year roadmap for the City’s current and future open space needs; (2) Urban Forest Plan (UFP), focused tree canopy preservation and growth.
- The new Forestry Division within BPRD is responsible for implementing the recommendations of the UFP.

BOSTON PLANNING AND DEVELOPMENT AGENCY (BPDA)

The Boston Planning and Development Agency is the planning and economic development agency for the City of Boston.

Compact Living Pilot

The Compact Living Pilot allows new buildings to include small, efficient housing units, contingent on meeting elevated standards of affordability, amenity space, and public transit access, among other things. Before this policy, smaller housing units were allowed, but not regulated. This pilot is available for any residential developments proposing 10 or more units. Although this pilot was sunset in May 2023 so that the City could evaluate its impacts and determine if the policy should be made permanent, several approved or under review projects in Charlestown contain or are anticipated to contain compact units.

Citywide Land Audit

The Citywide Land Audit, released in the Summer of 2022, is an inventory of all City-owned property, which cataloged all vacant or underutilized property. The goal was to identify land which could be used to meet the City's most pressing needs, including affordable housing, a public health approach to homelessness, and community development. The Land Audit identified the BPDA-owned Austin Street Parking Lots as a priority for redevelopment, and PLAN: Charlestown has included the visioning and RFP development for the site as part of the plan. See Chapter 3 for more information on the Austin Street Parking Lots project.

GROWBOSTON (THE OFFICE OF URBAN AGRICULTURE)

GrowBoston, also called the Office of Urban Agriculture, works to increase food production and support local food producers in Boston, ranging from farmers to gardeners and beekeepers.

The Grassroots Program

This program supports the development of community gardens with grant funds, City-owned land, and technical assistance.

THE MAYOR'S OFFICE OF ARTS AND CULTURE

The Mayor's Office of Arts and Culture (MOAC) is tasked with enhancing the quality of life, economy, and design of Boston through the arts. They support the cultural sector in many ways, including the provision of grants and other funding opportunities to individual artists and arts organizations. In addition to providing arts and culture funding and facilitating public art opportunities, MOAC engages in cultural planning for new development and helps artists find dedicated artist space in the City.

Boston Arts Commission

In furtherance of the production of art in public spaces, the Boston Art Commission (BAC), a volunteer body within MOAC, approves and commissions public artworks around the City. Publicly accessible art often comes from private development and in some case is not subject of the purview of the BAC. Developers can refer to MOAC's Guidance for Public Art on Privately-Owned Buildings or Sites as a starting point.

Boston Creates Plan

Released in 2016, the Boston Creates Plan was a collaboration between the City, a range of Boston artists, arts organizations, and advocates, and a team of consultants. The plan concluded with 5 goals, each of which was supported by a series of tasks or recommendations, with the intention that the goals all be achieved within ten years. Many of which have been partially or fully implemented as of 2023, described in an addendum added to the plan as an update.

THE MAYOR'S OFFICE OF FOOD JUSTICE (MOFJ)

The Mayor's Office of Food Justice (MOFJ) works to improve accessibility and affordability of healthy food in Boston, with the goal of creating food-secure communities with inclusive and diverse food-cultures.

Boston Double Up Food Bucks

This is a SNAP incentive program offering 50 percent off fresh fruits and vegetables with an EBT card at participating stores, with discounts up to \$5-\$10 daily.

Boston Summer Eats

Boston Summer Eats provides nutritious breakfast and lunch at no cost at over 100 sites across the City. All youth 18 and under are eligible.

Good Food Purchasing Program Ordinance

The goal of this program is to harness the power of municipal institutional food purchasing to achieve social, environmental, and economic goals. The intent is to put 1) public dollars in the hands of vendors who protect the environment, treat animals with respect, and honor racial diversity; 2) keep city dollars in the local economy, and 3) examine and address the impact of our food purchases on the climate.

The Farmers Market Coupons Program

This program runs from July to October, with coupon booklets of up to \$25 in value distributed monthly by 25 community organizations and healthcare centers across Boston to qualifying households. Coupons can be used at any City of Boston farmers market (*except SoWa market) to purchase fresh produce, dairy products, eggs, meats and seafood, dried goods, baked goods such as bread, and seeds or seedlings.

MAYOR'S OFFICE OF HOUSING (MOH)

The Mayor's Office of Housing is responsible for developing affordable housing, housing the homeless, and managing the City's housing real estate, working to ensure that renters and homeowners can find, maintain, and stay in their homes.

Inclusionary Development Program (IDP)

The Inclusionary Development Program (IDP) requires most private residential developments to contribute to affordable housing in Boston. The IDP requirement has historically been that any residential development, requiring zoning relief, proposing 10+ housing units must make 13% of the proposed units income restricted. In December of 2022, Mayor Wu announced proposed changes to the IDP that would lower the size of residential development triggering the requirement to 7 housing units, and increase the required proportion of income-restricted units to 20%. As of March 2023 these proposed changes are still under review and the 2015 IDP policy remains in effect. Should the updated policy be approved, it would go into effect in October of 2024.

Mayor's Office of Housing Resources

The Mayor's Office of Housing (MOH) works to create and preserve income-restricted housing, increase housing stability among Bostonians, and decrease instances of homelessness. MOH directs the use of City funding and land to build affordable housing, provides resources to renters to help them avoid eviction or other causes of displacement, offers financial assistance to homebuyers, helps seniors and other homeowners maintain their homes and avoid foreclosure, connects those experiencing homelessness with shelter and services, and develops new policies and programs to better meet housing needs. MOH offers dozens of resources to meet a variety of housing needs, ranging from income-restricted housing to financial assistance to legal help to guidance and information.

Citywide Land Audit

Described in detail under the Boston Planning and Development Agency section of this appendix.

PUBLIC IMPROVEMENTS COMMISSION (PIC)

The Public Improvement Commission (PIC) owns and manages Boston's public and private rights-of-way (ROW), including streets, sidewalks, and street trees. The PIC is an independent body managed by the Public Works Department (PWD). Generally, the PIC must approve any proposed changes to public ROW, including new street layouts, curb cuts, access easements on private property, and sidewalk cafes on the public sidewalk.

PUBLIC WORKS DEPARTMENT (PWD)

Green Infrastructure Team

The Green Infrastructure Team within the Public Works Department (PWD) is responsible for implementing green infrastructure across the City. Green Infrastructure (GI) is a broad term for stormwater management features that mimic nature. These may include a combination of soil and plants, trees, gravel or sand, which help to remove pollutants from stormwater and allow the water to absorb back into the ground. These features help prevent flooding, reduce the volume of potentially polluted water that flows into Boston's water bodies, and reduce the amount of water that flows into the City's storm drains. Green infrastructure has many co-benefits including cooling air temperatures and purifying the air, providing shade, mitigating floods, and providing a better aesthetic experience than static, 'gray' infrastructure like solid flood walls or barriers.

Appendix B

Transportation Capacity Analysis Summary

Understanding transportation conditions 30 years into the future is a complex and imperfect process. Modeling future transportation conditions requires an estimation of the future behavior of hundreds of thousands of individuals all making decisions based on their unique lives. Understanding that a model will never produce wholly accurate estimations of future conditions, long-term transportation modeling can be useful to understand the relative impacts of different changes to land use and transportation conditions. In other words, while a model may not be able to accurately predict real conditions, it can offer a useful comparison point between options. For the PLAN: Charlestown process, a regional transportation capacity analysis was used to help support the development of land use recommendations that are attuned to Charlestown's transportation context. This study used an iterative process to:

1. **Understand** the future capacity of Charlestown's transit system and street networks based on already-planned transportation and development projects (also called the "Future Baseline" condition)
2. **Test** the effect of growth anticipated through PLAN: Charlestown on those transportation systems
3. **Refine** land use and zoning recommendations to relieve strains on the transportation system
4. **Recommend** additional investments or changes in the transportation networks to address existing challenges and support future growth

Though the results of this transportation capacity analysis translated directly into changes made throughout the PLAN: Charlestown process, it was not the only factor considered in finalizing the PLAN. With a planning horizon 30 years into the future, uncertainty surrounding the uptake of development, and a generation of changes to transportation technologies, investments, and societal behaviors ahead of us, this transportation capacity analysis offered one tool to measure and refine the different futures contemplated throughout this multi-year planning process.

STEP 1: UNDERSTAND

A comprehensive transportation model developed in 2019 specifically to understand transportation and development in the Charlestown/Everett/Somerville area was used as the basis for transportation modeling in PLAN: Charlestown.¹ Built through a collaborative process between multiple municipalities, the Massachusetts Department of Transportation, the MBTA, the Central Transportation Planning Staff (CTPS) and the Metropolitan Area Planning Council, this model incorporates existing transportation systems (transit networks, streets, etc.), known transportation projects (like the reconstruction of Rutherford Avenue), anticipated development from around the region, and key population and travel characteristic data from the larger region to simulate future demands on the transportation system. This model was used as the comparison point (Future Baseline Scenario) for land use and transportation scenarios that were tested as part of the PLAN: Charlestown process as described in the sections below.

¹ [Planning for Improved Transportation and Mobility in the Sullivan Square Area](#), Lower Mystic Regional Working Group, 2019.

Figure 1: Transportation Analysis Zones (TAZs) Included in Future Baseline Model (image from Lower Mystic Regional Working Group Report)



Key assumptions built into the Future Baseline model include:

- Updated growth in jobs and population from approved and planned development in neighboring municipalities. These projections include a 38% increase in households and a 36% increase in employment within the regional modeled area.
- Changes and growth in travel demand from the entire Boston region. The new residents and jobs projected resulted in an estimated 34% increase in total trips traveling in the area across all travel modes.
- Implementation of the MBTA Bus Network Redesign network, including all route and headway adjustments.
- Completion of the Orange Line Transformation, including more frequent trains
- Reconstruction of Rutherford Avenue as a surface-level street with two vehicle travel lanes in each direction, a street grid in place of the existing Sullivan Square Rotary, and bus-priority elements to improve bus capacity and operations

STEPS 2 & 3: TEST AND REFINE

With the Future Baseline model in place, new land use and transportation scenarios for the growth areas in Charlestown were tested. For each, different combinations of land uses, densities, and transportation were fed into the model as inputs and a range of outputs – including the capacity of the transit and roadway networks at peak travel hours – were produced. In particular, the model was used to help answer the following four questions:

- 1. How many trips are generated from future land uses?** The mix and density of land uses influences the total number of trips likely to result from new development. Each land use type is expected to produce different numbers and types of daily trips based on the land use.
- 2. What mode are people using to take these trips?** People have different options for different types of trips depending on the types (or modes) of travel are available, the distance of the trip, and the time of day. This step of the analysis determined what percentage of the total daily trips are expected to be made by car, by transit, by bicycle, or on foot.
- 3. Where are the trips beginning and ending (Origin and Destination)?** Every trip has a beginning and an end. This step of the analysis estimated where trips start and end relative to the study area. The model also accounts for trips that neither begin or end in Charlestown (or “pass through trips”).
- 4. How are these trips assigned to the network?** Once the first three questions were answered, the analysis assigned trips to specific roadways and transit routes.

For the PLAN: Charlestown analysis, an iterative process was used. First, an Original Scenario that was developed based on community surveys was tested to estimate impacts on both transit and roadway network capacity. Based on the results from the original scenario, a Revised Scenario was developed and tested. For ease of comparison, both the Original and Revised scenarios are presented side by side throughout this report.

Overview of Scenarios

Through the PLAN: Charlestown process, an Original Scenario was tested and then refined based on model results. For each scenario, new land use and transportation network assumptions were layered onto the Future Baseline model for comparison. A high-level summary of the Original and Revised scenarios is provided below, with additional details in following sections.

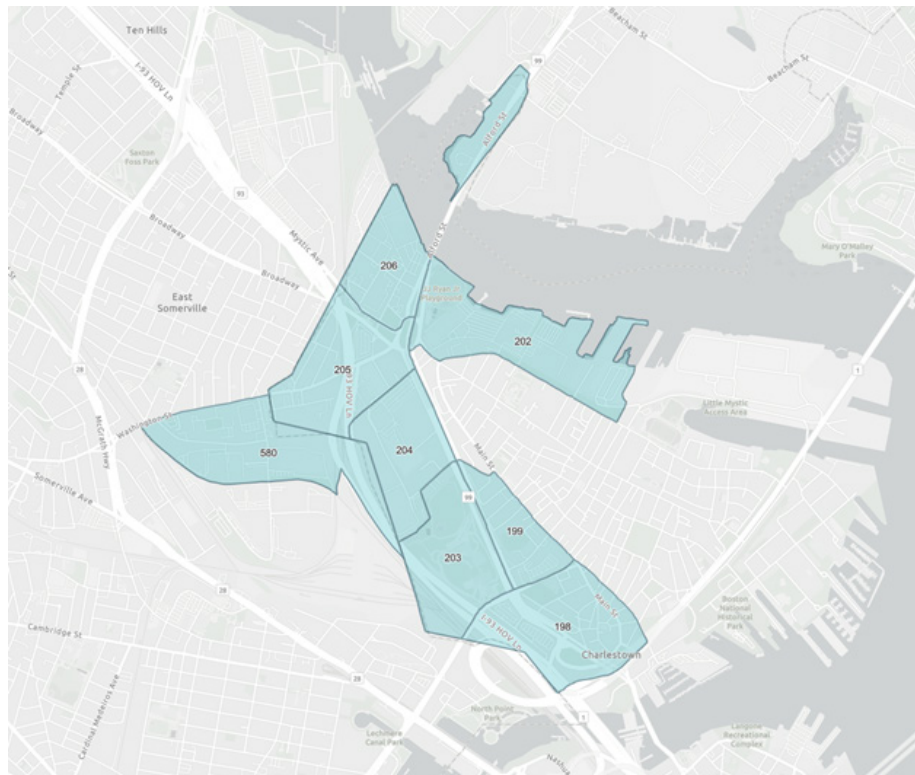
Table 1: Summary of Scenario Iteration

Scenario Assumptions	Original PLAN: Charlestown Scenario	Revised PLAN: Charlestown Scenario
Land Use	<ul style="list-style-type: none"> Adds land use and trips expected from PLAN: Charlestown Hybrid Scenario to Future Baseline Scenario (total of 19.62M gross square feet at full buildout) 	<ul style="list-style-type: none"> Reduced full build out from Original (Hybrid) PLAN: Charlestown Scenario by 10% and modified mix of uses to reduce commercial space and increase residential space
Transportation Network	<ul style="list-style-type: none"> Full implementation of MBTA Bus Network Redesign Orange Line Operates at 4½ minute headways at peak Includes new Sullivan Square Commuter Rail Station Includes three proposed Charlestown LINK Shuttle Routes 	<ul style="list-style-type: none"> Includes all transit assumptions from Original (Hybrid) PLAN: Charlestown Scenario Adds a new Silver Line connection from Everett to Sullivan Square Improves headways on the Route T7 (Bunker Hill Street) from every 8 minutes to every 7 minutes at peak Adds a new high-frequency transit service (Route T2) on Rutherford Avenue with service every 8 minutes
Street Network	<ul style="list-style-type: none"> Includes new public street networks envisioned in PLAN: Charlestown Hybrid Scenario Includes reconstruction of Rutherford Avenue as a surface-level street with Sullivan Sq grid and bus priority elements 	<ul style="list-style-type: none"> Includes new public street networks envisioned in PLAN: Charlestown Hybrid Scenario Includes reconstruction of Rutherford Avenue as a surface-level street with Sullivan Sq grid and bus priority elements

Future Land Uses and New Trips

Based on the land uses in each scenario, a maximum square footage for eight distinct Transportation Analysis Zones (TAZs) was calculated based on land area and building height maximums. The TAZs used in the Transportation Capacity Analysis are shown in Figure 2, though existing and projected trips from across the region are also included in the Baseline Model as described above. Though TAZs 198 and 199 extend into the Original Peninsula, additional growth is not planned for or included in the model for any area within the Original Peninsula outside of the Bunker Hill Mall. In response to public feedback, the Bunker Hill Mall site has also been removed from the area where zoning changes will be implemented as part of PLAN: Charlestown.

Figure 2: Transportation Analysis Zones (TAZs) with added development in PLAN: Charlestown Scenarios



Maximum Future Buildout and Mix of Uses

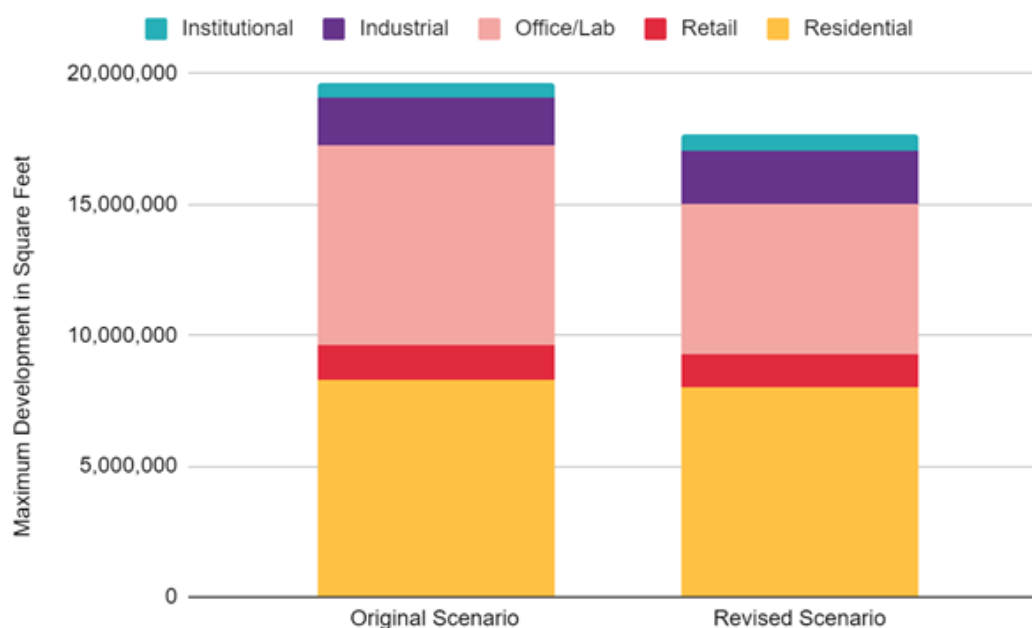
For each TAZ, the maximum square footage by use was developed as a precursor to estimating the total number of trips starting and ending in each TAZ. The maximum building area for both the Original and Refined scenario is shown in Table 2 and a comparison of the composition of uses across each scenario is shown in Figure 3. The figures shown in these tables illustrate the maximum possible buildout of square feet assuming every single parcel within the study area is redeveloped to its maximum potential over the next 30 years.

From the Original Scenario to the Final Scenario, the maximum square footage was reduced by 10%, with more significant reductions in uses that have a higher impact on the transportation network (like office/lab) and smaller reductions in lower-impact uses (like residential). The mix and total square footage was also adjusted in specific TAZs to account for differences in access and capacities of transportation options across TAZs. Finally, to encourage production of more housing units the final PLAN introduces a residential density bonus that places a condition on the maximum square footage that can be built on any given parcel.

Table 2: Maximum Land Use Program by Scenario

Land Use	Scenario	Maximum Gross Square Feet by TAZ								
		198	199	202	203	204	205	206	580	Total
Residential	Original	768,625	387,100	1,679,113	2,197,350	294,875	2,306,002	221,657	475,186	8,329,908
	Refined	768,625	380,360	1,245,212	2,570,829	303,489	2,004,925	381,549	388,789	8,043,778
	% Change	0%	-2%	-26%	17%	3%	-13%	72%	-18%	-3%
Retail	Original	54,902	68,074	379,677	281,407	142,100	226,288	80,754	43,199	1,276,401
	Refined	54,902	67,454	332,958	311,770	107,716	223,304	73,305	43,199	1,214,608
	% Change	0%	-1%	-12%	11%	-24%	-1%	-9%	0%	-5%
Office/Lab	Original	0	106,729	1,473,283	1,673,367	2,259,350	1,096,896	565,275	475,186	7,650,086
	Refined	0	121,804	752,533	1,263,150	1,548,693	986,634	727,523	388,789	5,789,126
	% Change	0%	14%	-49%	-25%	-31%	-10%	29%	-18%	-24%
Industrial	Original	0	0	0	0	0	0	1,859,272	0	1,859,272
	Refined	0	0	0	0	0	0	1,980,022	0	1,980,022
	% Change	0%	0%	0%	0%	0%	0%	6%	0%	6%
Institutional	Original	0	0	0	500,276	0	0	0	0	500,276
	Refined	0	0	0	631,915	0	0	0	0	631,915
	% Change	0%	0%	0%	26%	0%	0%	0%	0%	26%
Total	Original	824,141	561,903	3,532,073	4,652,400	2,696,324	3,629,186	2,726,957	993,571	19,616,555
	Refined	823,526	569,618	2,330,703	4,777,663	1,959,898	3,214,863	3,162,398	820,776	17,659,445
	% Change	0%	1%	-34%	3%	-27%	-11%	16%	-17%	-10%

Figure 3: Land Use Program by Scenario



Trips Generated from Maximum Future Buildout

The total number of new trips generated by the maximum future buildout was estimated using the Institute of Traffic Engineers (ITE) Trip Generation Manual (ITE Manual), which estimates the total number of trips generated for different land uses by time of day. For long-range planning efforts, where specific tenants (i.e. land uses) are not yet known, general categories that capture a range of uses within a land use category are used to reflect the broad development possibilities.

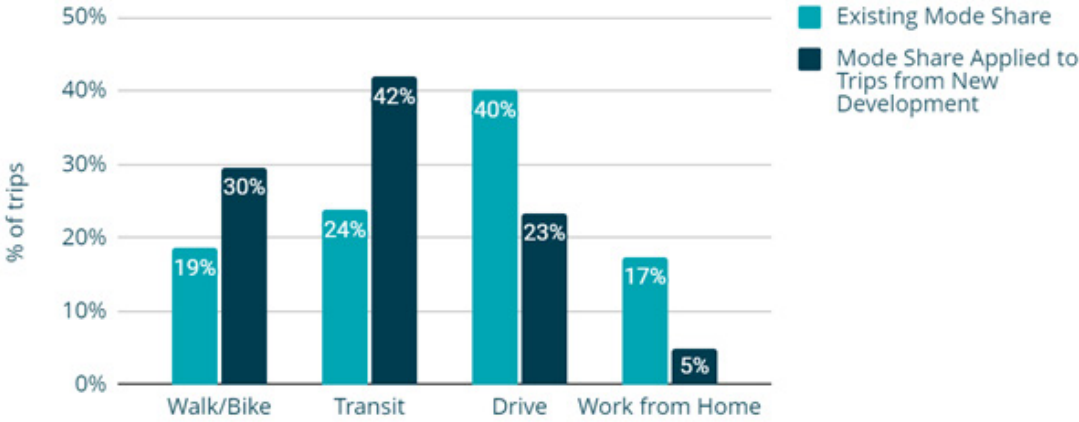
With a strong mix of uses and community resources within the area planned, residents and employees will find an opportunity to fulfill many needs without leaving the area. To reflect this, the total number of new trips generated by the maximum future buildout is reduced to account for trips that both start and end within an individual TAZ (also called an Internal Capture Rate). This reduction in trips was applied using a methodology from the Transportation Research Board (TRB). For this project, internal trip capture rates range from 10% to 20% depending on the TAZ.

Mode Share

Once the total number of trips is understood, each trip generated by the new land uses must be assigned to a specific mode – walking, biking, transit, or driving. Fundamentally, the mode share within the study area is expected to change from what exists currently due to the changes in land use and investments in the transportation network. The percentage of people traveling

by car is expected to decrease, while those using transit or active transportation (e.g., walking and biking), is expected to increase. GoBoston 2030, the City's transportation vision and plan completed in 2017, put forth target mode shares including a higher percentage (than currently made) of transit, bike and pedestrian trips, and fewer personal motor vehicle trips. In addition to reflecting the reality of our constrained built environment, these targets are reflected in the investments the City prioritizes including a new network of streets in the growth areas, dedicated bus lanes, more Orange Line and bus service, bike lanes and trails, and safer crossings for pedestrians. The mode share targets shown in Figure 4 for Charlestown from Go Boston 2030 were applied to the total new trips generated from the maximum future buildout.

Figure 4: Mode Share Comparison for Existing Commutes and Future Buildout in Charlestown²



² Existing mode share for commuting trips derived from U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates. The transportation capacity analysis mode share assumptions for work from home trips follow the 2017 goals established in Go Boston 2030, however these trips are likely underestimated based on existing and anticipated trends.

These mode shares were further refined to reflect travel behavior characteristics of trips by time of day (namely the AM and PM peak). Finally, vehicle trips were adjusted to account for carpooling based on the national average for different uses. These averages assume that for every residential, commercial, and industrial trip, each vehicle carries 1.18 people. For retail and institutional trips, each vehicle was assumed to carry 1.82 people. Table 3 shows the combined results of estimating the total number of trips generated by the future maximum buildout and application of mode shares and adjustments. Refinements made to the Original Scenario resulted in a better balance of trips coming into or leaving the study area and net reductions in total trips in the Revised Scenario.

While these mode share assumptions were applied to trips generated by the land uses in the PLAN: Charlestown scenarios, they did not apply to trips already included in the Future Baseline model from around the region. In other words, the transportation capacity analysis assumes that no additional mode shift happens over the next thirty years for any trips other than those that start or end within the study area.

Table 3: Maximum Future Buildout Trip Generation by Mode

Original Scenario						
Mode	AM in	AM Out	Total AM	PM In	PM Out	Total PM
Vehicle Trips	3,000	800	3,800	1,200	3,900	5,100
Transit Trips	3,900	1,500	5,300	1,900	4,600	6,500
Walk/Bike Trips	2,600	1,000	3,700	2,500	3,100	5,500
Total Trips	9,500	3,300	12,800	5,600	11,600	17,100

Revised Scenario						
Mode	AM in	AM Out	Total AM	PM In	PM Out	Total PM
Vehicle Trips	2,500	800	3,300	1,300	3,300	4,600
Transit Trips	3,300	1,300	4,600	2,100	3,900	6,000
Walk/Bike Trips	2,400	900	3,300	3,200	2,800	6,000
Total Trips	8,200	3,000	11,200	6,600	10,000	16,700

% Change						
Mode	AM in	AM Out	Total AM	PM In	PM Out	Total PM
Vehicle Trips	-17%	0%	-13%	8%	-15%	-10%
Transit Trips	-15%	-13%	-13%	11%	-15%	-8%
Walk/Bike Trips	-8%	-10%	-11%	28%	-10%	9%
Total Trips	-14%	-9%	-13%	18%	-14%	-2%

Trip Distribution and Assignment

Once total trips and the travel mode were determined, trips were distributed across the region and assigned to individual roadway and transit routes based on the distribution patterns from the original Lower Mystic Regional Working Group analysis (Future Baseline model). In general, the model assigns trips to roadways that provide the shortest travel time based on assumed travel speeds. For transit, the model assigns trips to the routes that have the quickest travel times based on transit schedules accessible from a given location.

Transportation Capacity Analysis Results

Using assumptions about the maximum land use program, trips generated, and future capacity of the transportation networks, the regional model was used to analyze how the PLAN: Charlestown scenarios impact transit and roadway utilization at a more granular level. Analyses were completed for three-hour peak AM and PM periods.

The results from the “Original Scenario” were used to make informed changes to both the land use and transportation programs. The resultant “Revised Scenario”, with its transportation network improvements as detailed above - was then also tested. The results for both transit and roadways are described below. Though capacity results for pedestrians and bicyclists were not specifically modeled, the PLAN also recognizes the myriad ways in which the built environment must change to support walking and biking as primary modes for future development in Charlestown.

Transit Capacity Results

The future transit network in Charlestown is already expected to expand significantly within the next ten years. The most significant of these improvements includes the completion of the Orange Line Transformation and its procurement of additional train sets that will allow the service to run every 4.5 minutes during peak hours, and significant additions to bus service frequencies and routes through the MBTA Bus Network Redesign.

With the PLAN: Charlestown scenarios, growth is intentionally targeted close to Orange Line stations to create homes and jobs that are well supported by transit. The results from the Original Scenario model run, revealed that the large increases in service on the Orange Line will provide more than enough capacity to meet the full buildout demand on the Line.

The transit capacity analysis demonstrated strong demand for many of the new transit services in the Original Scenario. Assuming full buildout under the Original Scenario, some of the currently-planned bus routes may need more capacity in the future to meet demand, including:

- The T101, which will connect Sullivan Square and Kendall Square via Main Street
- The T7, which will connect Sullivan Square and Downtown via Bunker Hill Street
- Route T109 and 113 that connect from Everett to Sullivan Square via Alford Street and provide connections to Somerville via Cambridge Street

In recognition of these results, the Revised Scenario includes several impactful transit network improvements including:

- Increasing the frequency on the T7 route to 7 minutes in peak periods
- The extension of the Silver Line from Chelsea to Everett and Sullivan Square via Alford Street (as recommended by the LMRWG and subsequent MassDOT SLX Alternatives Analysis)³
- A new high frequency bus route operating on Rutherford Ave with connections to Everett and Downtown

The increases in transit capacity between the Baseline, Original and Revised Scenarios are articulated in Figure 5 below. The complete transit network recommended in the Revised Scenario is represented in Figure 6.

² For more information on the MBTA's Silver Line Extension project, visit <https://www.mbtta.com/projects/silver-line-extension-slx-alternatives-analysis>.

Figure 5: Comparison of Transit Capacity in Charlestown Across Scenarios

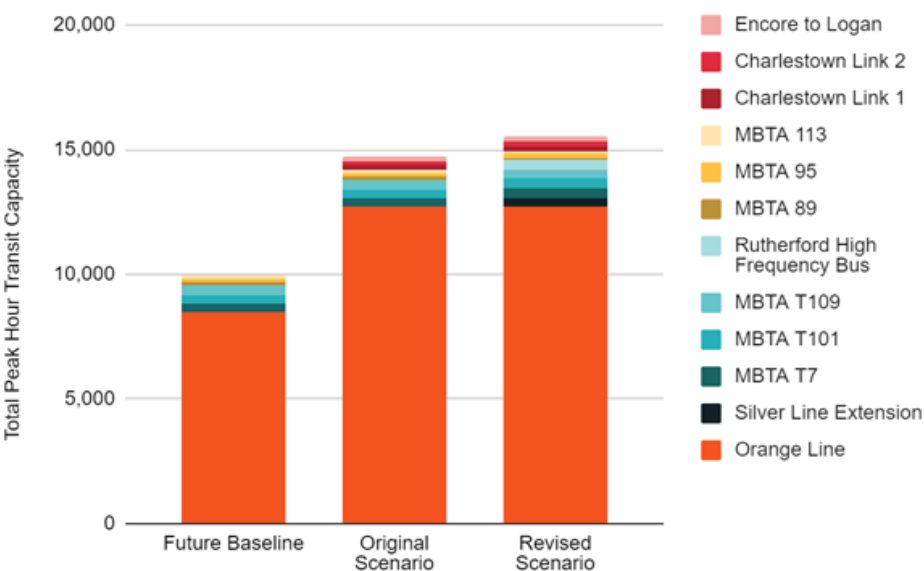
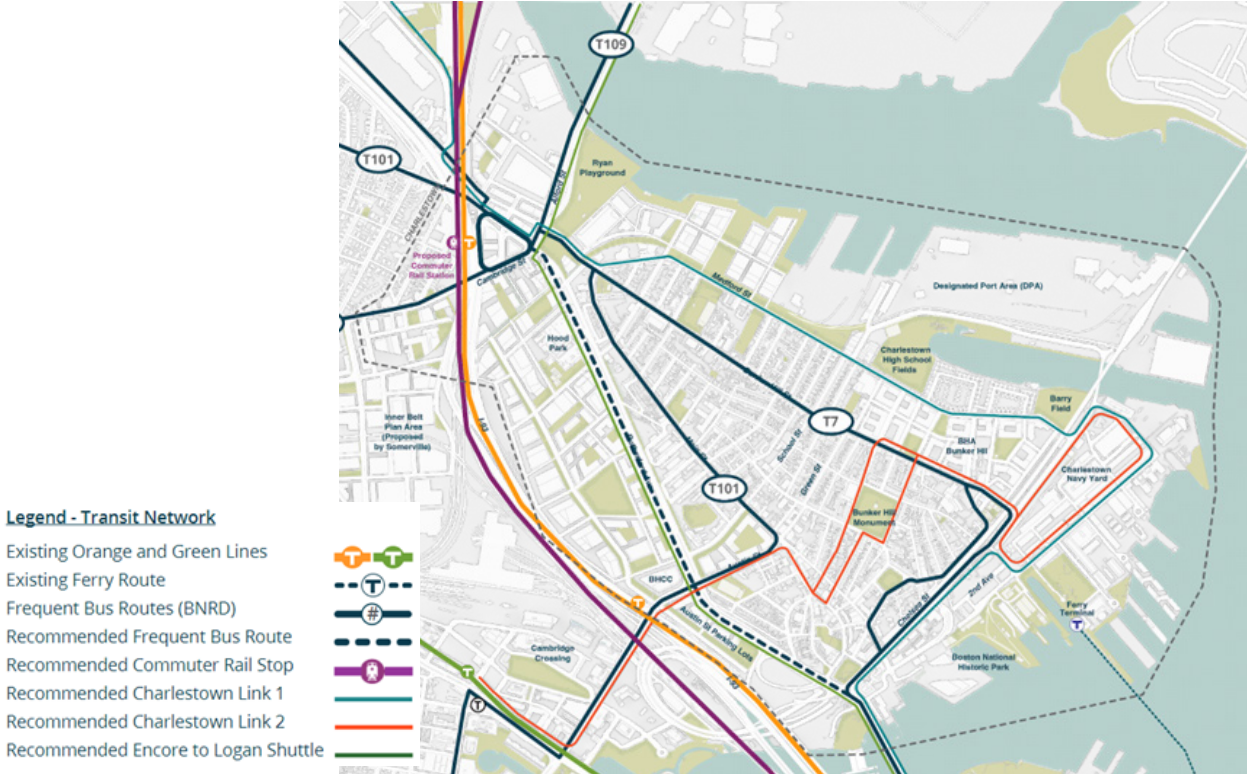


Figure 6: Transit Network for Revised Scenario



The improvements to the transit network provided by the Revised Scenario, relieved the overcrowding on the T7 (Bunker Hill St) and T101 (Main St), with demand from the new development west of Rutherford instead routed to the new high frequency bus route on Rutherford Avenue. Even with the transit improvements in the Revised Scenario, the model estimated that some corridors may have need more capacity to meet full build out projected demand at the 30 year time horizon. These locations include the Alford St corridor between Sullivan Square and Everett and the southern end of Rutherford Ave at the North Washington Street Bridge. Figures 7 and 8 below articulate the possible mismatch in demand and capacity if the maximum buildout is achieved:

Figure 7: Transit Ridership and Capacity across the North Washington Street Bridge

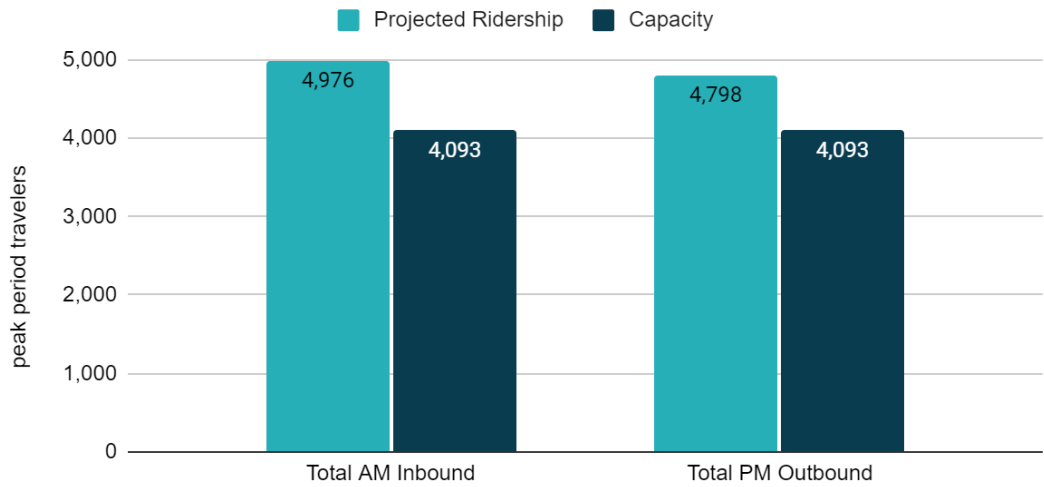
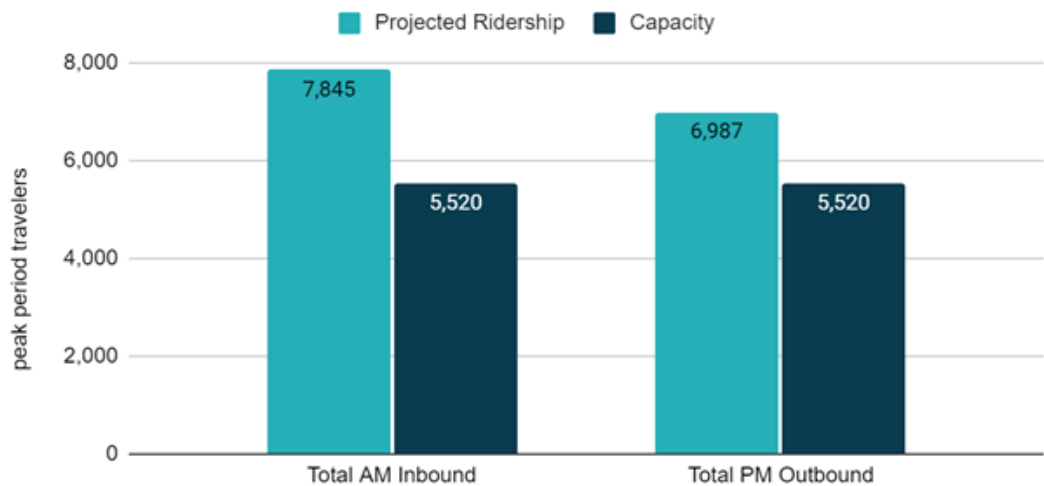


Figure 8: Transit Ridership and Capacity across the Alford Street Bridge



Roadway Capacity Results

The roadway capacity analysis for PLAN: Charlestown scenarios included calculating the estimated demand for every roadway link within the modeled network (see Figure 1) and comparing that demand to the capacity of that link. This measure - also known as a “volume to capacity ratio” - provides an estimated indication of how well-utilized individual segments of the roadway network would be under each scenario. To help make these results more digestible, a representative set of 15 control locations were isolated and examined for each scenario. These control locations cover a range of areas including Charlestown’s primary gateways, locations within the Original Peninsula, and regional connections.

Figure 9: Control Locations for Roadway Capacity Analyses



Between both the Original and the Revised scenarios, the same roadway assumptions were used. In other words, the differences in results of the roadway capacity analyses between scenarios isolate and reflect the impact of the different mix, location, and density of land uses in each scenario. Outside of the development of a new grid of streets west of Rutherford Avenue, no significant expansions of roadway capacity was included in the scenarios. As described above and elsewhere in the Plan, the scenarios also assume that there will be less roadway capacity on Rutherford Avenue in the future with two, surface-level vehicle travel lanes in each direction and no underpass on the corridor.

At a macro level, both the Original and Revised scenarios show an increase in utilization of roadways. While the results demonstrate a need for continued monitoring and adjustments in some specific locations, none are extraordinary for the greater Boston context. During peak hours – the only hours for which this analysis was performed – high roadway utilization is expected.

At a more granular level, the increase in utilization is not equally distributed across control locations or times of day. Within the Original Peninsula, all three control locations show more than enough capacity to meet demand under both the Original Scenario and Revised Scenario during both the morning and evening peaks. For most regional connectors, the estimated roadway utilization was not significantly different from the Future Baseline scenario for the morning or evening peaks in either the Original or Revised scenarios. For regional connector locations that were estimated to see a significant increase in the volume to capacity ratio, capacity was still estimated to be sufficient to meet demand with a few exceptions generally in the southern portion of the neighborhood.

Gateway locations – which are today the most stressed by vehicle demand – were also the most impacted by the tested scenarios. At gateway locations, the model estimated that during peak hours vehicle congestion along some of the gateways into and out of Charlestown would be pushed further over capacity while others would remain within capacity. With a reduction in the maximum square footage of development and the mix of land uses, the Revised Scenario resulted in utilization that was the same or better (less utilized) for the vast majority of gateway locations across both the morning and evening peak hours. With these changes, some locations were still modeled as over capacity and indicate that additional behavior changes that cannot be contemplated by the model (additional mode shift, deciding to not take the trip, going elsewhere for the trip) would occur. Results for both the morning and evening peaks are shown in the tables below.

Table 4: Roadway Utilization Across Scenarios, AM Peak

				Roadway Utilization (Demand/Capacity)			Change Between Scenarios	
Area	Control Location ID	Street	Direction	Future Baseline	Original Scenario	Revised Scenario	% Change Future Baseline to Revised Scenario	% Change Original Scenario to Revised Scenario
Gateways	1	Alford St	Northbound	66%	95%	97%	47%	2%
			Southbound	96%	144%	144%	50%	0%
	2	Maffa Way	Southbound	93%	125%	120%	29%	-4%
	3	Mystic Ave	Northbound	51%	64%	63%	24%	-2%
	4	Cambridge St	Bi-directional	93%	131%	127%	37%	-3%
	5	Gilmore Bridge	Northbound	95%	161%	151%	59%	-6%
			Southbound	109%	112%	112%	3%	0%
	6	Washington St Bridge	Northbound	46%	47%	47%	2%	0%
			Southbound	94%	94%	94%	0%	0%
Original Peninsula	7	Medford St	Bi-directional	39%	40%	40%	3%	0%
	8	Bunker Hill St	Bi-directional	28%	29%	29%	4%	0%
	9	Main St	Bi-directional	35%	37%	38%	9%	3%
Regional Connections	10	I-93 (North Charlestown)	Northbound	77%	77%	77%	0%	0%
			Southbound	129%	129%	129%	0%	0%
	11	I-93 (South Charlestown)	Northbound	73%	73%	73%	0%	0%
			Southbound	97%	97%	97%	0%	0%
	12	Rutherford Ave	Northbound	59%	93%	88%	49%	-5%
			Southbound	59%	93%	88%	49%	-5%
	13	New Rutherford Ave	Northbound	56%	66%	64%	14%	-3%
			Southbound	67%	73%	72%	7%	-1%
	14	Leverett Connector Bridge	Northbound	78%	78%	78%	0%	0%
			Southbound	143%	143%	143%	0%	0%
	15	Tobin Bridge	Northbound	65%	66%	66%	2%	0%
			Southbound	118%	121%	121%	3%	0%

Table 5: Roadway Utilization Across Scenarios, PM Peak

				Roadway Utilization (Demand/Capacity)			Change Between Scenarios	
Area	Control Location ID	Street	Direction	Future Baseline	Original Scenario	Revised Scenario	% Change Future Baseline to Revised Scenario	% Change Original Scenario to Revised Scenario
Gateways	1	Alford St	Northbound	121%	162%	170%	40%	5%
			Southbound	89%	104%	118%	33%	13%
	2	Maffa Way	Southbound	54%	65%	68%	26%	5%
	3	Mystic Ave	Northbound	93%	171%	159%	71%	-7%
	4	Cambridge St	Bi-directional	107%	163%	156%	46%	-4%
	5	Gilmore Bridge	Northbound	124%	149%	153%	23%	3%
			Southbound	106%	128%	124%	17%	-3%
	6	Washington St Bridge	Northbound	90%	90%	90%	0%	0%
			Southbound	64%	65%	65%	2%	0%
Original Peninsula	7	Medford St	Bi-directional	39%	42%	42%	8%	0%
	8	Bunker Hill St	Bi-directional	38%	39%	39%	3%	0%
	9	Main St	Bi-directional	67%	72%	72%	7%	0%
Regional Connections	10	I-93 (North Charlestown)	Northbound	122%	122%	122%	0%	0%
			Southbound	89%	89%	89%	0%	0%
	11	I-93 (South Charlestown)	Northbound	106%	106%	106%	0%	0%
			Southbound	73%	75%	75%	3%	0%
	12	Rutherford Ave	Northbound	73%	112%	107%	47%	-4%
			Southbound	73%	112%	107%	47%	-4%
	13	New Rutherford Ave	Northbound	60%	65%	64%	7%	-2%
			Southbound	113%	148%	141%	26%	-5%
	14	Leverett Connector Bridge	Northbound	134%	134%	134%	0%	0%
			Southbound	102%	103%	103%	1%	0%
	15	Tobin Bridge	Northbound	133%	144%	141%	6%	-2%
			Southbound	63%	64%	64%	6%	0%

STEP 4: RECOMMEND

Results of the transportation capacity analyses were one input used to modify the final recommendations included in PLAN: Charlestown. Alongside public comments, citywide housing production needs, market analyses, and more, the transportation capacity analysis helped provide a sensitivity analysis to inform how both land use and transportation conditions could be modified to limit overtaxing the transportation system.

Land Use Recommendations

Based on the results of capacity analysis, the land use program was modified from the Original Scenario to the Revised Scenario to help reduce both the total demand and peak hour demand generated by new development. To achieve these ends, the maximum development square footage in the Revised scenario was reduced by 10% from the Original Scenario. In addition, the mix of uses was modified to include a larger share of lower-impact uses (like residential) and a smaller share of higher-impact uses like lab and office (which tend to draw more regional trips concentrated around peak hours). Changes to the locations of specific uses and densities were also incorporated to address both public comments and to help locate higher-impact uses logically within the regional roadway network.

These recommendations were carried over into the final recommendations included in the proposed zoning amendments for PLAN: Charlestown. In addition, the inclusion of the proposed residential density bonus – which only allows the proposed maximum densities if a project is 100% residential above the ground floor– places a condition on the ability for individual sites to reach the development scenario tested in the transportation model. In practicality, the residential density bonus further limits the likelihood that the maximum development square footage tested in the Revised scenario would ever be reached.

Transportation Network

Even with significant transportation investments already planned for implementation over the coming decade, additional transportation network recommendations are included to reflect the possible long-term impacts of development in Charlestown. In addition, increases in travel demand will necessarily occur incrementally. As individual projects are developed, each is evaluated for its impacts on the transportation system and expected to mitigate undue impacts. The results of this capacity analysis can be used to help guide how individual projects can contribute to a well-functioning transportation system, however understanding of individual sites and specific interventions will be best understood at the project-by-project level.

Transportation Demand Management

Managing the total number of trips, time of day trips are made, and the mode used to make trips is essential to growth not only in Charlestown, but throughout Boston. To support a future where most trips to and from new development in Charlestown are made by walking, biking, and transit, PLAN: Charlestown includes recommendations to manage travel demand including restricting the supply of parking allowed for individual projects, precluding residential parking

permits for development west of Rutherford Avenue and in Sullivan Square, and incorporation of street design guidelines that promote walking and biking.

Transit Network

As articulated above, the majority of transit network improvements are already funded and will be realized in the next 10 years. The MBTA's Bus Network Redesign will deliver more than twice as much bus service to the Original Peninsula than the existing system. In addition to providing twice as much service as existing routes, these routes will open up new destinations for Charlestown residents; the T101 will provide Charlestown residents with a one-seat ride to Kendall Square and, critically, will create bus connections to Community College Station. The T7 will provide residents with a one-seat ride to South Boston via Downtown and the Seaport. Taken together, the significantly expanded frequency and wider range of destinations that will be served by these local Charlestown routes represent a new dawn for transit in Charlestown's Original Peninsula.

With the addition of the PLAN's recommended high frequency bus service on Rutherford Ave, the Charlestown Link shuttles, and the Silver Line Extension to Sullivan Square the analysis revealed a couple of corridors that may eventually experience capacity constraints if the maximum buildout is achieved. Fortunately, bus capacity is a relatively malleable commodity. Investment such as bus lanes create the ability for more frequent service with the same number of buses and operators. With planned physical investments in bus priority already being developed (for example, on Rutherford Avenue, Cambridge Street, and the North Washington Street Bridge), the ability to efficiently add more service in these locations will be feasible in the longer term, if needed. In particular, based on future monitoring, the following transit capacity expansions may be warranted in the future if the maximum square footage contemplated under the Revised Scenario is reached:

- More frequent service on the Rutherford Avenue Frequent Bus Route and Silver Line Extension to provide additional capacity on the Alford Street Bridge
- More frequent service on the Rutherford Avenue Frequent Bus Route, T7, and Charlestown Link 1 Shuttle service to provide additional capacity over the North Washington Street Bridge

In addition, as the MBTA and MassDOT continue work on the next phase of the Silver Line Extension beyond Sullivan Square, the City supports current alignments that extend Silver Line service to Somerville via Cambridge Street and Kendall Square or Downtown via Rutherford Avenue.

Roadway Network

As new projects are developed, PLAN: Charlestown calls for a new public street network to be built out to support those future uses. This, combined with the funded reconstruction of Rutherford Avenue and Sullivan Square, represent the most significant recommendations to the roadway network that were included in the transportation capacity analysis scenarios. These changes to the roadway network reflect a conservative approach to future roadway capacity on Rutherford Avenue by reducing the street to two lanes in each direction. As the

Rutherford Avenue and Sullivan Square redesign project advances, more detailed modeling that anticipates the future development included in PLAN: Charlestown will be completed.

Results from the model estimated that the Original Peninsula and most of Rutherford Avenue are expected to have sufficient capacity in the future peak hours, even if the maximum square footage included in the Revised Scenario is produced. However, the model estimated that if the maximum square footage included in the Revised Scenario were built, some of Charlestown's neighborhood gateways may have insufficient capacity to meet peak hour demand. While the regional model was able to identify possible links in the roadway network that may be stressed assuming full buildout, the detailed models used for creating engineered drawings and signal timings for the Rutherford Avenue project will be able to identify possible solutions. In particular, based on the results of this analysis, a focus on addressing the Alford Street Bridge, Cambridge Street, Rutherford Avenue southbound in the evening, and Mystic Avenue northbound in the evening is recommended. Other major projects – including MassDOT's upcoming Gilmore Bridge project – will likewise offer additional opportunity to address more granular capacity constraints.

Walking and Biking Networks

Though not explicitly tested in the transportation capacity analysis, Charlestown's walking and biking networks must evolve to support the scenarios contemplated in PLAN: Charlestown. Roughly 30% trips to and from the study area are expected to be made on foot or bike. Emphasizing walking and biking as standards for new development will require significant investment in the walking and biking networks both directly connecting to development sites as well as within the broader Charlestown and regional context. As part of PLAN: Charlestown, guidelines for new streets within the areas around Sullivan Square and west of Rutherford Avenue are included. In addition, the PLAN recommends establishing a neighborhood bike network that connects riders of all ages and abilities to neighborhood destinations throughout Charlestown and to adjacent neighborhoods. Many of the ongoing major infrastructure projects - such as the redesign of Rutherford Avenue - will provide important progress toward making Charlestown well-connected by walking and biking.

Appendix C Financial Feasibility Analysis Summary

The purpose of the financial feasibility analysis is to determine the incremental value created by zoning changes following from the planning process. The consultant team provided three development scenario archetypes based on a current as-of-right scenario, and a proposed future as-of-right scenario that specifies: height, lot coverage, FAR, parking ratio, and use. This analysis was conducted for publicly owned parcels within Charlestown, and calculated the incremental increase in residual land value created by proposed regulatory changes which will inform future disposition strategies and determine opportunities for further public benefit from these increment of value (e.g., income-restricted housing, transportation improvements, etc.). RKG Associates, Inc. were the consultants for this feasibility analysis.

RKG's Approach:

RKG tested the financial implications/returns of different development scenarios using the proforma model created as part of the recent Inclusionary Development Program (IDP) analysis for the Mayor's Office of Housing. For the IDP Study, the model was constructed with assumptions that could be tailored to each neighborhood in the city, including Charlestown. This model already included many of the development assumptions for the Charlestown neighborhood and Boston as a whole and had been vetted by the MOH and the IDP committee.

RKG made some additions to this model to account for nonresidential land uses like retail, office, and life science that were not in the original IDP model. These additions allowed the consultants to test different land use assumptions and compare the change in value creation. RKG tested scenarios on public land that included standalone multifamily housing as well as mixed use development that typically included multifamily, retail, and life science uses.

MODELING ASSUMPTIONS:

The development proforma model used for this analysis built upon the modeling and assumptions used for Boston's IDP Study with added components for analyzing retail, office, and life science uses. Since the IDP model was constructed, structural economic changes occurred primarily with the changes in inflation and interest rates. For the Charlestown modeling exercise, RKG increased the lending interest rate assumption from 5% to 6% and the Cash-on-Cash return expectations from 5% to 5.5% as RKG tested different development scenarios.

RKG conducted financial modeling to answer the following questions:

1. Is development financially viable under an existing zoning buildout, and if not, what would the land value or subsidy need to be to make it viable?
2. Is development financially viable under the future zoning buildout, and if not, what would the land value or subsidy need to be to make it viable?
3. If mixed use development is not financially viable under the future zoning buildout, is it possible to shift the mix of residential to commercial to make it viable?

RKG ran the development scenarios for each parcel through the proforma model to determine the impact on land value and the cash on cash (COC) return and

whether the project would meet or exceed standard return expectations in the market.

For each parcel, RKG first tested a development program under existing zoning recognizing this is what a property owner/developer could presumably build today. RKG tested two financial scenarios:

1. What return does the development program generate using current market rate land values?
2. If the market rate land value does not generate a COC return of at least 5.50%, how would the land value need to change to reach the desired COC return?

Multifamily Residential Modeling Results

To determine the COC return of these scenarios compared to existing conditions, RKG held the land value per unit constant to see how COC returns changed if someone paid the same amount for the land but could build much more intensely. Initial findings indicated that it would take significant subsidy on a per unit basis to generate market return and development interest.

Mixed Use Modeling Results

Publicly owned parcels were tested using a mixed-use development program. The mix of uses included retail, lab, and multifamily residential assumed to all be located in the same structure. In these test cases, RKG noted that the default land values provide COC returns closer to the 5.50% threshold compared to the multifamily test cases. The reason for this is the substantial impact of the lab component where market rents are enough to cover even the high construction costs.

FINDINGS AND CONCLUSIONS:

Modeling development programs on the publicly owned parcels under existing zoning assumptions compared to the development envisioned in the Growth Area illustrated the challenges faced by Charlestown (and in other parts of Boston) where land values, construction costs, interest rates, and return expectations have outpaced what multifamily residential rents can support to create a financeable development deal. Even offering public land at no cost is not enough of a subsidy to overcome the high construction costs of steel frame buildings with structured or underground parking.

The exception is the mixed-use development program where life science/lab is a heavy component of the overall program. In these instances, it is possible to include enough lab square footage to offset the inclusion of multifamily housing in a steel frame building. However, in order to maximize the number of multifamily housing units in the development program, the public entity may want to consider offering the land at a discounted value. There is still some value to capture from the land, but not enough to capture full market value in the form of a one-time cash payment for the land or in return for additional public benefits.

RKG recommended the City proceed with setting the vision for the future and let the market adjust over time. Given the longer time frame for development, RKG found that development costs and revenues are likely to change opening opportunities to revisit public benefits over time.

